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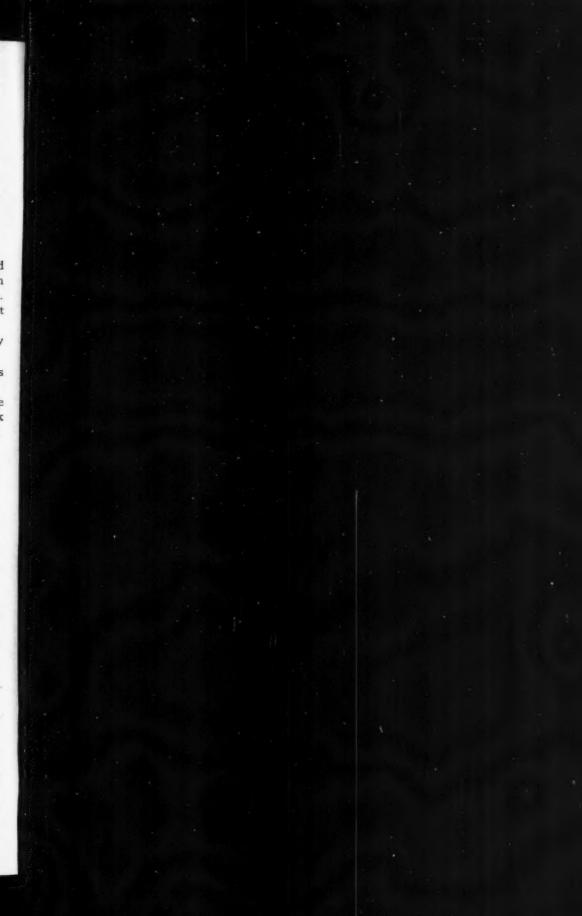
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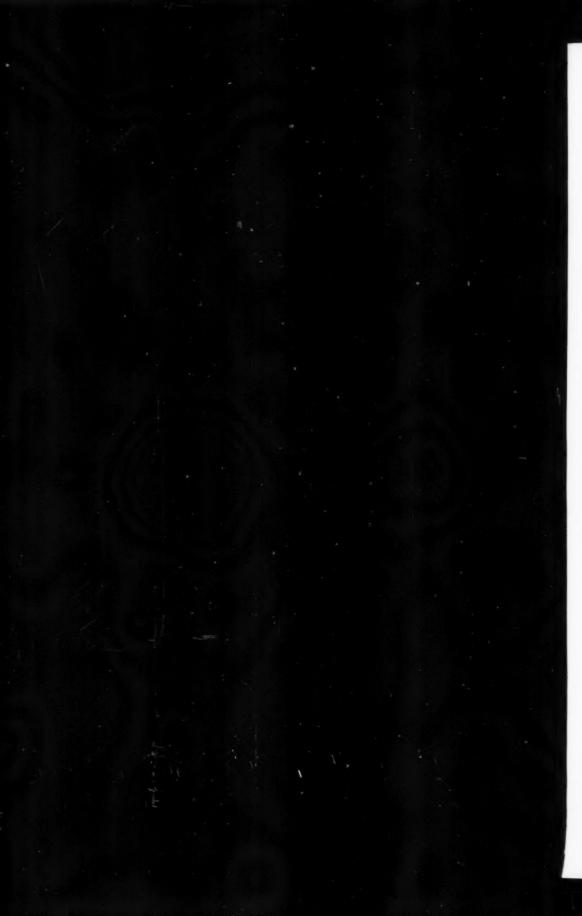
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Seventh Series Volume XXIV.

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FROM BEGINNING Vol. CCXLII.

"THE RIDDLE OF THE UNIVERSE"; FIVE OPEN LETTERS.

I.

You ask me if I have read Professor Haeckel's "Riddle of the Universe"; if I consider his scientific position sound; and if his arguments against metaphysical conceptions are, in my opinion, valid? Yes, I have read the work with some care. Professor Haeckei's outlook on the world of phenomena, though primarily that of a biologist, is wide and comprehensive. Although there are some of his scientific conclusions which appear to me open to criticism, the general trend of his constructive scheme of scientific interpretation is on lines which are winning, or have won, their way to ac-But I cannot regard his ceptance. arguments against metaphysical conceptions as either cogent or valid. It appears to me that he is dogmatizing from negative premisses when he says, in the words which you quote: "Monistic cosmology proves, on the basis of the law of substance, that there is no personal God; comparative and genetic psychology show that there cannot be an immortal soul; and monistic physiology proves the futility of the assumption of 'free-will.'" But, if I mistake not, such are the conclusions in which your interest chiefly centres; and you want to know whether, if the science of the book is in the main correct, you are logically bound to abandon all belief in these matters. I think not. But you may be led by your studies in philosophy and science to reconsider, and, perhaps, modify, the forms in which your faith is cast.

I wish, however, to understand quite clearly your present position. Am I right in inferring that you were brought up to accept, perhaps without thought of criticism, a belief in God and the cardinal teachings of Christ; that you have found this helpful to you in your life; and that you still desire to retain this faith? I must be assured on this point. If you are already quite convinced that Professor Haeckel and others have succeeded in removing a serious incubus on human action, and if you feel heartily glad to be rid of it all, there's an end of the matter between you and me. I can do nothing to help you, since in that case you have no wish

for such assistance. I should be wasting time in replying to your letter; you would regard my reply as one more instance of credulous folly. I shall assume, then, that you desire to retain a belief in a Power which lies behind the veil of phenomena; that such writings as those of Hume on the philosophical side and Professor Haeckel on scientific side have presented difficulties to you; that you wish to get at the truth at all hazards; and that you have approached me as one who may possibly be able to help you to find a way of reconciling a belief in an unseen, but not wholly unknown, Power with the teachings of science and philosophy. In undertaking the endeavor on these terms I must, however, warn you that I am not likely to resolve all your difficulties. One can see but a little way, and that dimly, in these matters. There must remain much that is at present perplexing. I must warn you, too, that I cannot hope to make my reply light and easy reading. With this by way of preface, I address myself to the task you have placed before me, and in this and subsequent letters will give you my views, not with confidence as an authority, but with humility as a seeker after truth.

Professor Haeckel entitles his work the Riddle of the Universe. Now, a riddle, I take it, implies an answer. It is a problem to which there is a solution, whether the solution can be immediately given or not. The eminent German biologist scornfully rejects certain answers in terms of which men have sought to solve the riddle. That, you will agree, he makes abundantly clear. But have you found in his book any alternative solution? Has he so much as indicated the direction in which an answer is to be sought? Does he not, rather, lead us to infer that for man there is no answer? But, if this be so, there is no riddle, though

there may be interesting and instructive statements of fact and generalizations based thereon. Or, if there be a riddle, as would seem to be implied by the title of his book, Professor Haeckel not only gives it up, but appears to urge you to do likewise.

But though this is the impression produced by the study of Professor Haeckel's work on my own mind, there can be little doubt that a great number of his followers will tell you that it implies a quite erroneous view of the matter. Science, they will reply, is solving the problem, in the only rational way, all along the line. Every advance in scientific interpretation is a step towards the further and more complete solution we seek. It is absurd to contend, they will urge, that the theory of universal gravitation and the growth of the evolutionary conception leave us just where we were. Did Galileo. Kepler, Newton, they will ask, do nothing to advance the solution of the world problem? Did Lyell and Darwin do nothing? Has Professor Haeckel himself done nothing? The Riddle of the Universe is like an acrostic with many lights. Science is answering the lights in detail. It is ridiculous to say that the exponent of these several answers is giving up the whole acrostic as unanswerable.

This seems reasonable enough if we admit that the Riddle of the Universe and the riddles of science are on the same plane of interpretation. But is this so? Granted that evolution wins the secrets of phenomenal sequence along the whole line-as I for one believe that it is winning or is to win. Granted that all material changes and all mental changes fall under certain broad and comprehensive laws with regard to their nature and uniformity. Grant all this. Grant all that science within its proper sphere of research can logically claim. Are we any nearer to a solution of the Riddle of the Uni-

verse? Not by a hair's breadth. The problem may have become from one point of view more complex, since we realize more fully than ever the vast multiplicity of detail, from another point of view more simple, since we grasp the unity and close interdependence of the totality of phenomena. But the essential heart of the problem remains absolutely unchanged. It is to-day what it was in the Middle Ages, in the times of the great Greek Philosophers, in the days of the early Jews and of Assyrian and Egyptian thinkers. Nor can any conceivable advance of scientific interpretation alter it one whit, though it may modify the form in which the riddle is asked.

And why is it that the problem in essence remains unchanged, no matter how often the conquests of experience and the advance of science may lead to its re-statement? Because it is at heart a metaphysical problem. Because the riddles of science and the Riddle of the Universe are on different planes of thought. Because the answers to the former and the answer to the latter must be given, if given at all, in different terms. The whole gist of the contention of Professor Haeckel and his school is that scientific answers to scientific problems are trustworthy; and that the introduction of metaphysical considerations in the solutions of these problems is wholly inadmissable. So far they are on secure ground. But they go further than this. They assume or imply that the problem of the universe, as a whole, is a scientific problem-which it assuredly is not; and that the introduction of metaphysical considerations is here also inadmissible, which shows that they do not understand the nature of the riddle which men, since the dawn of reason, have attempted to answer.

For there are two distinct and different types of question which may be asked with regard to any group of

natural phenomena. I beg you to endeavor to distinguish clearly between them. First, what are the facts, what is the nature and order of their sequence, under what generalizations may the facts and their observed sequence be comprised? These are the questions of the scientific Particular cases are explained by science when they can be referred to general laws; but general laws are for science neither more nor less than condensed statements of observed fact. Secondly, what is the source and origin of the facts; how comes it that the sequence is that which we invariably find it to be; what conceptions, if any, can we frame of the cause of the events which we observe? These are questions of what I shall call the metaphysical type. The answers which are given to such enquiries are of a different kind from those in the field of scientific investigation. Let me restate in a slightly different manner, for clearness here is essential. My point is that the basal platform on which science rears its superstructure may be formulated as follows:-Human experience is trustworthy; beyond such experience and valid inferences based thereon, in terms of like experience, we may not go; any given group of events, as presented in experience, is the sequel to other such events which, when the essential precursors have been duly extricated from those which are irrelevant, is termed the scientific cause. So far science. But the reason why there is any experience at all, and why the sequence of events presented therein is what it is, does not concern science as such. This is a metaphysical question. It constitutes the Riddle of the Universe. Its answer, if given at all, must be formulated in terms of Causation, differing altogether from the relevant antecedence with scientific causation is concerned.

The adequate grasp of the distinction

I am trying to help you to draw between scientific causation in terms of antecedence and sequence within the field of experience and metaphysical Causation as the underlying reason for, or raison d'être of, the sequence as given, is essential. The failure to realize the distinction is the source of many misconceptions and much confusion. When John Couch Adams, after an exhaustive analysis of the configuration of the solar system, foretold the presence of the hitherto undiscovered planet which swam into the field of M. Galle's telescope, he applied his astronomical experience in terms of antecedence and sequence. In accordance with the established canons of that experience certain changes in the configuration of the solar system demanded the existence of Neptune. For Newton had already shown, as the outcome of his astronomical experience, grandly generalized, that as a matter of fact material bodies do attract each other in a degree directly proportional to their joint mass and inversely proportional to the square of their distance asunder. But if we ask why they thus attract each other, the question may have one of two meanings. It may mean:-To what antecedent conditions is the attraction due, or in what other terms, of ethereal stress and so forth, may it be expressed within the sphere of scientific experience? To this question a scientific answer may some day be given. But the question may also mean:-What is the underlying cause of gravitative attraction or of ethereal stress or whatever other expression of the facts we may reach? In that sense it is a metaphysical question. And if we say that it is due to Force as a cause of this kind we are dropping into metaphysics. It is true that the word "force" is conveniently used in physics as a term under which the degree of attraction can receive mathematical expression. In this sense

it has its due place in scientific interpretation. But the case is altogether different, if the word Force is given as an answer to the question:-what makes bodies attract each other in the manner which we actually do observe? expression Gravitative Force so employed does not refer to the antecedent of the attraction. It refers to its underlying cause. I ask you:-Is there an observed antecedent force and then an observed sequent attraction? Surely not. The attraction is simply the expression of the concurrent existence of something which is thus expressed. From the scientific point of view we may quite correctly speak of the force, that is to say, the degree, of gravitative attraction, but not of the attraction as due to gravitative force. And if the man of science replies that he cannot get on in his thinking without the assumption that a Cause of some kind underlies the bare facts as given in experience, we need not quarrel with him. It is part of his humanity-for rational man is after all a metaphysical being. But it is no part of his scientific interpretation of nature. It has reference to the problem of the universe which lies behind and beyond that interpretation. All talk in half-crown scientific textbooks of chemical force, crystalline force, vital force, as causes of observed phenomena, is sheer metaphysics, whether the compilers realize the fact or not.

I must now bring my first letter to a close. In it I have done my best to help you to grasp the fact that science deals with experience as it is. By observation and experiment it tries to get at the way in which events do actually occur; it groups them, classifies them, and expresses them in the general formulæ which we call the laws of nature. And we should be prepared to follow science just as far as ever it can lead us in the interpretation of experience. But when all is said and

done the question will arise:—What is the Cause of the events and the sequences which are presented in and to experience? And this question expresses the Riddle of the Universe.

II.

Science, I said in my former letter, builds upon a basis of observation and experiment, and it starts with the common every-day experience of normal human folk. Let us take a familiar object, such as a stick of red sealing-wax. And let us agree that, for you and me, and for anyone else normally constituted, this bit of experience is just as real as real can be. Our friends the physicists and the chemists get out of that bit of sealing-wax a number of other experiences which they interpret in terms of matter, energy, electricity, and so forth. We need not follow them in their investigations. But I ask you to consider whether the matter and energy which express in abstract terms the results of their very important and valuable manipulation of experience, can possibly have any reality more real than the stick of sealing-wax which they took into their laboratories. If so, at what stage of their manipulation was any added reality introduced and in what manner? It is possible that you may be tempted to say that the matter and energy are for you a good deal less real than that bit of wax which you can see and handle, and, if less real for you, so, too, for man. But here I think you are wrong. Just in so far as the chemist and physicist hold firmly to experience and to the sequences disclosed thereby, no matter how abstract the terms in which the conclusions they reach are couched, their trigonometrical survey of the field of nature will be valid and its products realities in and for experience. But surely, on this analogy, the results of this survey will not have any greater

and more valid reality than the base line—that stick of sealing-wax—from which they started.

If this be granted we may deal with the concrete experience of the visible object rather than the more abstract product of such experience, matter and energy. We shall thus be dealing with reality nearer home. Now what has the psychologist, as a man of science, to say on this head. He has his analysis to perform; but we need not follow him into technicalities. The net result is simple enough. He, too, stands firmly on the ground that experience itself is the basal reality. But he finds that this reality yields on analysis two aspects, the objective aspect and the subjective aspect, the external realities of physical science, and the internal realities of human perception and thought. Both are invariably present in every bit of experience. Neither can be more real than the experience itself with which the psychologist starts; and neither, in and for experience, can exist without its correlative. This universe of stars and suns and planets; of hills and valleys and spreading seas; of animals and plants; of nerve centres and nerve fibres; what is it but the objective aspect of a varied experience at every stage implying someone to whose experience it can appeal? Psychology, as science, apart from metaphysical considerations, states distinctly that object and subject are the products of the analysis of experience, and not that experience is the product of the interaction of independent existences, the objective world on the one hand, and the subject or person who experiences on the other.

But here, perhaps, on grounds of practical common sense, you will say that we may surely infer the independent existence of the sealing-wax. When I leave my writing-table and not a soul is in the room you feel quite sure that the stick of wax is there all

the time as an object independent of me or anyone else. But let me urge you carefully to consider what you mean by the above assertion? Surely you mean that for anyone who comes into the room, or even peeps through the keyhole, the sealing-wax will be a visible object. That is to say, whenever the conditions of experience are introduced the results conform to these conditions. Should you urge that if every sentient being were annihilated the material universe would still remain unaltered, that the valleys and hills of England would still be in existence as such independently of all experience, I must ask how you can possibly prove it. You may imagine that just one fortunate individual escaped annihilation and revisited England only to find the hills and valleys exactly as they were before. But you are thus re-introducing the conditions of experi-And the question is whether ence. these things exist independently of such experience under the same guise that they present to our observation.

No doubt you will recognize in this the old problem of the absolute nature of the noumenon, as contrasted with the phenomenon. Why do I drag it in here? Our friends, the men of science and the men of common sense, will exclaim:-What is the use of discussing such questions? We deal with practical matters and are not going to trouble ourselves with these metaphysical problems. Well and good. Why should they? The sealing-wax as visible and tangible, the molecules and atoms, electrons and ions, matter and motion, all in terms of direct or extended experience, suffice for them. These are all realities in and for experience. That is good enough as a basis for common sense and for science. Granted. is it good enough when the Riddle of the Universe is the problem in hand? We need not inquire what is the Cause of all this experience, nor ask the question why we come to have experience at all. But if we do, we must not expect answers in terms of science. These are metaphysical questions and demand metaphysical answers. They are integral parts of the Riddle of the Universe. If pseudo-science asserts that the sealing-wax exists independently of experience in just the same guise as it appears in and for experience, it is doing that which true science abhors. It is making a statement which, from the conditions of the case, it cannot possibly prove.

I think it, however, not improbable that some of the materialist friends, of whom you speak, will very impatiently exclaim that, if they cannot prove the continued existence of the sealing-wax when nobody is in the room to gain experience from it, neither can you or I disprove it. They will say that they constantly act as if it were there all the time and find their expectations turn out correct. Well; if they do take this line, beg them to realize this: that they are ready to assume the existence of that which they cannot prove, because it gives unity and consistency to certain facts of experience which do actually occur. If you and I have occasion to make any such assumptions, it will not be for them to throw the stones of criticism at our heads. What they do, we may surely do likewise.

Accepting experience for what it is worth, however, neither more nor less, let us take a bird's-eye view of the wonderful drama which science has written for and presented to us; and let me summarize it in terms of the most thorough-going and advanced evolutionary theory. There is no necessity to enter into minute details: a bare panoramic outline must suffice. The forms of matter, the elements and inorganic compounds, have been evolved from some homogeneous primitive stuff. The constituent members of the

solar system have been condensed from the wreckage materials due to the collisions of pre-existing systems. Within and upon the earth's crust rocks and their mineral constituents, seas and continents, mountains and valleys, have taken form in the course of geological On its surface, in due course, protoplasm, that substance which has played so important a rôle in the later ages, arises by natural genesis from the constituents which had hitherto failed to find the requisite conditions for the existence and continuance of life. Upwards and onwards organic evolution proceeds from the simple to the complex until the varied forms of vegetable and animal are reached. Within the animal frame nerves and nerve-centres take form and substance; closely connected their functional activity, consciousness emerges; and step by step, stage by stage, this assumes the protean forms of that human experience in terms of which the whole drama is presented.

But here I must ask you to pause. We started on our evolutionary career with primordial matter and energy; we have reached a highly elaborated conscious experience. And somewhere in the midst of our course we have to say that consciousness emerges. From what does it emerge? Is this consciousness a special and peculiar form of energy? If so, in accordance with all the canons of the scientific treatment of energy, we ought to be able to assert that for any given amount of consciousness that appears, a corresponding amount of some other form of energy disappears. But we cannot affirm anything of the sort. We can affirm, on the assumption of the evolution hypothesis, that consciousness is always in some way connected with certain nerve-changes or other protoplasmic happenings and that these may be interpreted in terms of energy. Its existence, so far as an interpretation

based on experience goes, is always (on the hypothesis with which we are now concerned) closely bound up with the existence of certain material changes. It is evolved with certain kinds of lifestuff as a going concern. It is not evolved from the matter and energy of protoplasm. W. K. Clifford saw this clearly enough and was forced to the conclusion that we must postulate mind-stuff from which it has been evolved. For really thorough-going evolution this postulate (or rather some such postulate) appears to me to be necessary. Just as the primitive homogeneous substance contained the stuff out of which chemical elements and compounds (and eventually protoplasm) could be, under appropriate conditions evolved; and just as in association with it there existed some primordial form of energy; so, too, associated with it was the primordial consciousness-stuff out of which sensation, thought and experience could evolved.

This, however, is parenthetical. here express a protest against the erroneous view that out of matter and energy consciousness and thought can be produced by any conceivable evolutionary process. But if the man of science is content with the assertion that at some stage of organic evolution consciousness does appear, as a matter of fact, and that, when it thus emerges, it is always in some way associated with certain organic processes, no logical objection can be raised. In any case I am not urging you to reject the evolutionary conception as applied to mind from its earliest manifestation onwards-not even as applied to the human mind as studied by a science comparative psychology knows its limits as science. I suggest that we should agree to accept this conception just as far as it can possibly be carried in scientific interpretation. The psychologist tells us that he can

trace an orderly sequence among states of consciousness, and can provisionally formulate the laws of mind. He assures us that he takes these sequences frankly as observed facts, comprises them under general statements, and interprets new facts in terms of these statements. Let us, then, grant that if he does this with due scientific caution he can convince us that, given this or that configuration of the field of consciousness, under assignable conditions, this or that movement of thought follows. And let us further grant that, from the evolutionary standpoint, according to its most advanced exponents, we must accept fully, freely and unreservedly the doctrine of determinism.

I think you will admit that the evolutionary scheme I have thus barely and briefly sketched is sufficiently thoroughgoing to satisfy the most extreme advocate of this sweeping and all-embracing doctrine. Unquestionably it goes beyond, and that in many points, what has been definitely proved. But I am ready to concede that it does not go beyond what may be definitely proved by further advances in scientific interpretation. Personally I believe that all this, not perhaps exactly in this form but in some such form, may hereafter be proved. And I am not ashamed to confess that my belief in the evolutionary interpretation outruns the existing limits of assured certainty. I think that any thorough-going evolutionist, who is honest, must make a similar confession. But if in this matter belief may go beyond what can here and now be proved, why not in other matters also?

Well, then, we have here our evolutionary conception, and with regard to it my counsel is:—Be at least prepared to accept it as far as ever it can be carried. Don't say:—Just here or there or elsewhere I am going to fill in the gaps of existing knowledge, based on the data of science, with direct flats

of the Almighty. For what if next year, or many years hence, some of these evolutionary gaps are filled in by the newly-won proofs of science? You will have to confess that you were mistaken. And though, as an honest man, you will own that you were wrong, there will be great rejoicing over the fact that on these, and perhaps other, points, your position has been carried and a victory for materialism has been won. Furthermore be quite ready to admit that it is open to anyone who accepts evolution fully and completely to say:-This scientific creed suffices for me. If there be an underlying Cause of the whole business, it is unknowable to science; and I do not trouble my head about matters which science proclaims to be thus unknowable. To hold oneself bound by such a statute of limitations is a perfectly logical and consistent attitude. comes to this. We have formulated anew the Riddle of the Universe in evolutionary terms and we do not pretend or attempt to answer it because it cannot be answered by science. But you need not be bound by such a selfdenying ordinance. And I take it that you are one of those who cannot help recurring again and yet again to the world-old question: What is behind it all? What is the source and origin of this stately progress of events revealed to human experience under the conditions of space and time?

III.

So far, I have suggested that you should hold yourself ready to accept evolution not only so far as it can at the present time be proved, but even further, reaching out beyond established certainties in an attitude of belief. I have now to pass on to the more difficult task of laying bare the foundations of a metaphysical hypothesis. I can only deal with the meta-

physical basis: not with the superstructure which religion has built upon it. For you this treatment is appropriate, since your letters show that your difficulties have arisen from your study of science and philosophy. To others I should, perhaps, appeal rather through their sense of moral and historical values, of which I may write in another letter. For them metaphysics, as foreign to their modes of thought, would only be a source of additional confu-They need the appeal to the heart rather than to the head. not be impatient with their attitude of mind; but remember how varied are the motives which spur the human will to action.

I go back to my sealing-wax which I saw on my writing-table yesterday, which I found there when I entered my room an hour ago, which may have been seen by half-a-dozen people when I was engaged elsewhere. I assume that for this experience of mine, and for the corresponding experience of other folk, there is a Cause, something which makes the experience possible, something which exists and abides independently of the presence of any human or other sentient being. It is a pure assumption; but somehow I seem unable to get along without it; and I find that most of my fellow-mortals are in like case. Even my friends, the men of science, make the assumption; only they generally insist on defining it in terms of the experience it produces, forgetful or ignorant of the fact that a certain Bishop of Cloyne, whose works you have read, had something rather cogent to say on the matter. The gist of Berkeley's destructive argument is that the substance of matter, supposing it to exist, cannot possibly resemble any of those forms of experience which we call the qualities of material objects. And there is no gainsaying this argument. It is true that Bishop Berkeley regarded the underlying substance as one with the Divine Spirit; but at the present stage of our enquiry, whatever it may lead to in the sequel, we may rest content with the much more modest assumption of the bare existence of some Cause.

Let us start, then, with this assumption, that underlying the orderly sequence of phenomena with which experience deals there is something which is their Source. What shall we call this something? Cause will do as well as any other term. Of this Cause the whole evolutionary process is the manifestation to experience in time and space. Granting this assumption, can we say anything with regard to its nature and attributes? In attempting to give an answer to such a question we must remember that experience discloses the nature of the manifestation and that this, on strictly rationalistic grounds, can be our only guide as to the nature of the underlying Cause which is so manifested. And the net result of all advance in scientific interpretation is the deepening conviction that, amidst multifarious diversities, the system of Nature as disclosed to experience is a connected system; that the observed linkage between the varied phenomena is such as to give unity to the whole; that Nature is one and indivisible, in the sense that every several object or event is an integral part in a totality which would not be the same if that fact were omitted. If then the Cause of which the universe is a visible and tangible expression is the source of a manifestation so essentially orderly, so intrinsically determined, so completely unified, it must have the attributes of ordering, and determining and unifying. If we grant the metaphysical assumption of its bare existence, this much seems necessarily implied. But these terms must not, at the outset, at all events, be accepted in any anthropomorphic sense-certainly not in the

sense of an external influence playing down upon the phenomena as a man may work an orrery. Nay, rather the conception of a determining Cause is that of an energizing influence within the phenomena, that of which the objects and their mutual attractions and repulsions are the visible or otherwise sensible manifestations. In a word the Cause must be conceived as immanent and not external. It is the metaphysical reality underlying the realities of experience. And the present tense alone is applicable. The manifestations occur in and for experience under the conditions of time and space. Any given expression of Force, say, for example, any particular case of gravitative attraction, may have occurred a hundred years ago and at the furthest limits of the solar system. But it is of the particular occurrence, not of the existence of Force, that we use the past tense. In the language of metaphysics Cause is regarded sub specie aternitatis. Time and space are in and for experience, not for that which, timeless and omnipresent, underlies experience.

Now I must ask you to bear with me if I compare and contrast this metaconception of immanent Cause, timeless and spaceless, underlying the whole of the evolutionary process, with a cruder and less consistent conception which has been and still is formulated and held. Let me contrast it with that of an external First Cause, which set the spheres a-rolling along their appointed grooves, and stood aside, so to speak, while inorganic evolution ran its course; which then intervened to fashion protoplasm, and again stood aside till this new phase of evolutionary progress reached a certain stage, only to interfere once more, or more than once, to introduce new elements of consciousness and thought. A First Cause! Let us take this in the form which is often naïvely.

stated and humbly accepted. does it come to? We trace a chain of scientific causation, in terms of antecedence and sequence, a long, long way back in time, and then, when we have got as far back as ever we can, we posit just one more antecedent as a First Cause. But this antecedent is of a different nature from all the rest. They are configurations described in terms of matter and energy. This is no such configuration. Throughout the rest of the chain, wherever scientific explanation rules, any given configuration is not only the cause of the one that succeeds it but the effect of that which precedes it. But this is not true of your First Cause. And then here and there in the midst of the chain of events, whenever difficulties scientific interpretation arise, you introduce Divine interposition; perhaps to start the phenomena of life, of consciousness, of human thought. Moreover, if I understand you rightly, apart from these major interferences, there may be an indefinite number of minor interferences. Will not the rationalist say that this seems to him like mending a beggar's coat with patches of goodwill? May he not urge that all this occasionalism of metaphysical influence appears to him to introduce elements of so incalculable a nature as to make the whole series hopelessly irrational? If once you grasp his point of view, can you feel surprised at his rejection of this First Cause?

But there is another conception of the First Cause; not that of an initial Force at the back of time, not that of occasional force-impulses now and again, but rather that of an underlying omnipresent Power of which the sequences of science are manifestations in time and space. This, I beg you to note, does not imply the denial of the existence of God, nay, rather it is a protest against the limitations imposed on the exercise of His power, restrict-

ing it to certain specific phenomena on certain specific occasions. Nowise restricted in this way, the underlying Power is manifested here and now in the formation of a snowflake, or the fall of a wounded sparrow, as it was manifested at some stage of the evolutionary process in the terrestrial origin of protoplasm. To such a conception of metaphysical influence the man of science, though he may of course ignore it, has no grounds for an attitude of antagonism. If a concurrent metaphysical interpretation in no way interferes with his own scientific interpretation, it is mere waste of energy to turn aside from his proper work to do needless battle with a friendly ally.

So far, then, we have reached the conception of underlying Cause, immanent, manifested in time and space. We have seen that, whether the reality of the existence of this Cause which lies behind the enchained sequences of science be accepted or rejected, it can never be antagonistic to, it can only be supplementary to, the scientific interpretation of the phenomena which are, ex hypothesi, its manifestations. And we have seen that if the sequence of phenomena forms a rational, orderly, and law-determined system, the underlying Cause is, for the metaphysician, the source of this rationality and order, determining that which for science is determined.

I must now direct your attention to another aspect of phenomenal existence, that which is manifested as consciousness and thought. In regarding as phenomena the mental products with which the scientific psychologist deals, I have to part company with a large section of those who seek to reach a metaphysical interpretation. For many strenuously contend, as you know, that these mental products are themselves the noumena—the underlying metaphyssical realities of which phenomena are objective expressions in space and time.

I cannot stay here to argue the question, nor to indicate certain reservations I might be disposed to make. It will be better to continue the discussion on the lines which seem to me most helpful. Granting, then, that consciousness and all its cognitive products, the impressions, percepts, concepts and thought-systems of the psychologist, are manifestations of the underlying Cause, the first thing to note is that we may accept mental evolution fully, freely and unreservedly. The whole course of this evolution may be explained scientifically in terms of causal sequence. I do not say that it can now be fully explained; but I believe that it may be so interpreted, at any rate so far as cognition is concerned, by carrying on psychological research to its ideal limits. Determinism rules here as it rules elsewhere. There has been a parallel evolution of the brain-cortex and its dependencies on the one hand and of the thought which accompanies its functional activity on the other hand.

Let us grant this to the evolutionist -and I desire to grant him all that he can logically claim. Let us grant that the scientific psychologist, working hand in hand with the physiologist, may formulate a complete scheme of mental evolution in terms of causal antecedence and sequence. With this he may rest content; at this point he may elect to stop. He may loyally accept the facts disclosed by his researches asmatters of experience, he may deal with observed changes in thought-configuration within a field of consciousness, just as the astronomer deals with changes of physical configuration in the solar system. And he may say:-This suffices for science and beyond science I do not go. By all means let him stop here if he can and will. But he must be careful not to exceed these limits: For just as the physicist may talk of Force as the cause of motion and be-

unaware that he is dropping into metaphysics, so may the psychologist talk of Will as the cause of mental sequence and not realize that this, too, is a bit of metaphysical interpolation incommensurate with the other elements of his curve. Will of this kind has no place in scientific psychology. course we may use the word "will" as a convenient term by which to express the degree of mental activity, just as in physics we may employ the word "force" as a convenient term under which degree of attraction and so forth may be mathematically expressed. But Will as the underlying Cause of any mental sequence, or any bodily activity which is connected with such sequence, is, like Force in the interpretation of changes in matter and energy, a metaphysical and not a scientific conception, As such it is to be accepted, if it be accepted at all.

And here I may observe that firmly as the scientific interpreter of mental phenomena may insist upon the close, intimate and, indeed, vital connection between conscious processes and physical changes in the brain-centres, he cannot logically regard consciousness as the product of the brain in the same sense as bile is a product of the liver. Nor can he say that physiological changes in the nervous system are the scientific cause of mental states. So far as we have any opportunities for judging, the brain change is not the antecedent of the mental process but its strict concomitant. There is probably no time-interval between the one and the other. . It may be said that this cannot be asserted with scientific confidence. But surely we can assert that even if there be a time-interval the antecedent nerve-tissue configuration and the sequent thought-configuration belong to different orders of phenomenal existence. Hence, from the strictly scientific point of view, the simplest and most direct statement of

fact is that of what is termed parallel-That neural and mental phenomena run a parallel course so that we can pursue now one and now the other line of rails, according to convenience of treatment, is the nearest scientific statement of the facts that we can at present make. This concomitance, as it is also called, is accepted by the metaphysician, who sees in it much that is helpful in his own special field of inquiry. He assumes, as themetaphysical basis of phenomenal parallelism, the identity of underlying Cause. He reaches the conception of that form of monism according to which thought is the subjective inner aspect of the energizing operation of that self-same Cause of which the functioning cortex of the brain is the outer or objective aspect. Alike beneath the objective realities of nerve changes, as studied by the physiologist, and the subjective realities of parallel states of consciousness, he postulates the metaphysical reality of a determining Cause, the source of orderly and systematic evolution in both the phenomenal fields.

To the Cause which underlies, unifies, and determines the observed phenomenal sequences in the sphere of mind-to that which makes mental development an orderly and rational process, he applies the term Will. Will, in this sense, is, as I have before said, a frankly and avowedly 'metaphysical conception, The scientific psychologist can get on without it, so long as he sticks closely to statements of psychological facts and does not attempt to ask why the facts are what they are. But in this case it seems peculiarly difficult to preserve consistently the strictly scientific attitude and not to postulate a metaphysical Ego underlying and unifying the phenomenal sequences which are grouped by the psychologist under the head of the empirical ego. Some of us feel that our personality includes, not only

the related elements of our thought and experience, but also a relating power which energizes and synthesizes the whole. And, for many of us, this metaphysical aspect of personality is its most essential and fundamental characteristic. It is this, rather than the related experiences which it unifies, that gives significance to our conception of personality. But even if this be the case, by all means let us frankly acknowledge, that it is a metaphysical and not a scientific conception. No good can come of mixing up and confounding the metaphysical conception of an underlying Personality with the scientific conception of personality as a given related series of mental processes whose continuity is to be explained through the phenomena of memory, association and so forth.

You probably know of the discussion to which Descartes' celebrated dictum, Cogito ergo sum, has given rise. not fail to realize that it is a metaphys-From the scientific ical postulate, point of view it suffices to affirm Experentia est. The est here refers to the reality of the experience under the conditions of observed mental sequence. But both the cogito and the sum of Descartes' basal maxim refer to the metaphysical existence of that which makes thought what it is; of that which underlies the sequence of mental phenomena. If once you clearly grasp the distinction you will see that, throughout the long discussion, the opposing parties have not infrequently taken their stand on quite different planes of interpretation.

But on the assumption that there is a metaphysical basis for the cogito, my own system of related mental sequences is just the one bit of experience in all the world where the nature of the underlying Power which pervades the universe can stand revealed if it can be revealed at all. The same Cause which drives the planets on their

course, which sweeps the storm over land and sea, which silently fashions the frost patterns on the window-pane, which gives sensitiveness to the amœba and intelligence to the elephant, works in the busy brain and thought of man. And here alone, in the underlying depths of his own personality, does he obtain glimpses of its nature. He himself is manifestation of the energizing Power; it is working in the midst of him, through every phase of his activity, it is closer to him here than elsewhere; and here, where alone, if anywhere, it stands revealed, it is revealed as personal. The implication is obvious. He may not, indeed, say that the Power which energizes the universe is a human person like himself. But may he not say that, since man is the highest product of the evolutionary process, and since, in man, its Cause must be conceived as personal, the indwelling source of the evolutionary process as a whole may be conceived in terms of a Personality transcending the limits of its manifestation in man? May he not urge that it must at least be Personal, since it is thus revealed in that one and only expression which gives unity to his thought and experience? If you should urge that it is difficult to conceive that anything of the order of Personality underlies the manifestation of inorganic phenomena I must again ask:-What, then, is the basis of all our knowledge of inorganic phenomena? And to this I must again reply:-It is the objective aspect of human experience and is known to us only as part and parcel of that experience. The personality which underlies the subjective aspect of this experience is one with that which underlies the only other aspect, that of the external world, which we know.

IV.

I am not surprised that the conclusions reached in my last letter leave on

your mind a sense of dissatisfaction. Summarizing the main results of our enquiry, we reached the conception of a Cause of phenomenal existence, immanent, timeless, spaceless, most intimately revealed in human personality, and therein one with the eternal omnipresent Spirit. In the first place you urge that this pantheistic conception of the universe as the manifestation of an eternal Spirit so abstract and metaphysical may, perhaps, satisfy some few thinkers here and there but will certainly not appeal to the average heart of mankind; it will not much influence the lives and actions of men. But you must remember that all we have attempted so far is to seek just such metaphysical foundations. Does it not, then, come to this, that we have not found that for which we have not yet attempted to seek? In the second place the identification of the individual will with an omnipresent Cause, precludes, you say, the possibility of any relationship between the one and the other. In the third place you feel that this immanent and omnipresent unity ascribed to the underlying Cause of all things and all men seems difficult to reconcile with the ineradicable belief that your neighbor has a personality independent of, though in close relationship with, your own.

Now, I confessed at the outset that I was not likely to be able to resolve all your difficulties-I am doubtful whether I can say much that is helpful here. I do not pretend to have found an adequate solution of the Riddle of the Universe. But this seems clear. The independence you speak of is relative, not absolute. You would not claim that you are absolutely independent of your neighbors, since you are related to them in many ways through social intercourse. Nor would you seek to establish for your individual will an absolute independence of God, but rather an independence

that implies the closest relationship. No doubt this is puzzling; this independence in the midst of dependence; this apartness from and yet intimate connection with other existences. And yet this duality in unity is one of the fundamental characteristics of our experience. What are the principles by which I suggest that you should be guided in your considerations? First, that experience is trustworthy and is to be fully trusted in matters of fact and interpretations of fact, not only up to the limits of assured certainty, but even beyond these limits, in the attitude of scientific belief; secondly, that metaphysics affords, for those who grant its initial assumptions, a supplementary interpretation which must not be antagonistic to, or at variance with, the conclusions of science; and, thirdly, that the supplementary conceptions of metaphysics must keep in the closest possible touch with that experience to which they seek to give a rational By these principles we must basis. still be guided. Now, the characteristic of experience to which I must now revert is its essential indivisibility and yet its two-fold aspect in analysis. Psychology, I said in my second letter -psychology as science, apart from metaphysical considerations, states distinctly that object and subject are the products of the analysis of experience (that is to say, they are distinguishable aspects of that experience), and not that experience is the product of the interaction of independent existences, the objective world on the one hand and the subject or person that experiences on the other. But we were faced by the occasionalism of individual experience, and by the fact that your experience and mine and that of mankind correspond in such a way as to render a system of scientific knowledge possible; hence we were forced to assume the existence of an underlying Cause which should give unity and

continuity to social experience. From the nature of our scientific knowledge it seemed that if we granted the bare existence of such a Cause it must have the attributes of ordering and determining and unifying. It remains to be seen whether, if we turn to that part of our experience which deals with human intercourse any further attributes can be disclosed. A consideration of this very real phase of human experience may serve in some degree to lessen the difficulties you raise.

Your letters show me that you have followed with some care the progress of physical science, and that you have not neglected the study of psychology. I do not know, however, how far you have considered the problems which arise in ethics. This, you are aware, is what is termed a normative science, that is to say, one which deals with standards of right and wrong. It tries to formulate the ideals which men frame for the guidance of conduct. Each one of us, who is worth his salt, forms some conception of the ideal self he would fain be in act and deed, and the ideal community to the realization of which he desires to contribute.

Now ethics may be treated from a frankly scientific point of view. We find as an actual fact that men and women, some of them civilized like ourselves, some of them with very different social notions from ours, do form ideals of one kind or another, though we may often think them very wrongheaded. These ideals may be classified, the nature of their sequence may be described, and generalizations may be reached as to their mode of develop-In all this the treatment of ethics is proceeding on the scientific lines I have tried to indicate. But the question arises:-Why does a man have ideals at all? You will, perhaps, be told that they are the outcome of his character and the circumstances of his life and upbringing. No doubt they are.

I am not denying for a moment that in the formation of every ideal there is a chain of antecedents the links of which we might, but often cannot, unravel. I am not denying that every man's character and personality is a synthesis of elements the stages of which might be traced if only we had adequate knowledge. But it seems to me that of this synthesis there is a Cause which, for metaphysics, is the Will of that individual. And then, the further question arises:-Why, having such ideals, does a man act on them? From the strictly scientific point of view the bare fact is accepted. The act is the sequent of the ideal as antecedent, and there's an end of the matter. But is this an adequate and satisfactory interpretation of human conduct? Can we rule out purpose and end and the desire for their attainment as causes of man's endeavor? I for one think not. Conduct and history lose their meaning if we do. But remember that purpose and desire are causes in the metaphysical and not in the scientific sense. They make the facts what they are and render a rational interpretation of human existence possible. May we not say that the realities of practical life are the ends for which men strive?

From this conception it follows that, quite apart from any psychological discussion of the genesis of ideals as facts of consciousness, the relationships of men and women to each other in practical life are founded on a doctrine of values in and for that life. whole of the magnificent drama unfolded by the history of human endeavor implies the causal interaction of wills and personalities, and every recorded deed has its moral value independently of its being an event which, as a matter of fact, occurred at a particular time and place. In this drama the actors are real persons, not merely puppets galvanized into a semblance of activity by a blind determinism. De-

terminism there is, but it is the human will which determines. And this physical world in which we live is the theatre wherein the drama of purposeful conduct is enacted. Though this, too, is a manifestation of the underlying Cause, yet those other manifestations of the eternal Spirit, in the character of our friends and those of historical persons lie closer to the heart of our social life. And here, perhaps, we rise nearer to the conception of timeless and spaceless existence than in other fields of thought. Plato and Aristotle lived among their fellowcountrymen of ancient Greece; but their philosophical ideas are not thus limited in time and space. Their value transcends these limitations. Shakespeare and Goëthe live now in the spirit just in so far as the worth of their poetic insight is recognized and their thought is incorporated in ours. We feel that they only expressed, under the conditions of their age, truths which, though till then unexpressed, were already implied in the conduct of men; truths which are, no matter how and when they may find their appropriate statement.

In them, and in many another son of man, we obtain broken and partial glimpses of the Spirit from whom they emanate and of whom their lives and work are helpful revelations: incomplete revelations it is true, but real to us just in so far as their thought and insight have value for our guidance in the conduct of life, just in so far as they enable us to realize the Divine purpose. And what of Christ? you feel that however and wherever elsewhere expressed, some abiding truths of great value for your guidance found in Him their highest and best expression? Do you feel that He who claimed to be Son of God and Son of Man, the spirit of whose teaching has permeated Christendom, with all its many faults and failings, has, through

this teaching, helped you to realize, far more intimately than any amount of metaphysical disquisition, the existence of an immanent Power and of its revelation for man in man? I do not know in what degree, and at what moral and spiritual price, you have been led to assess the value of Christ and Histeaching in relation to the underlying Purpose of human development. But I take it that in precise proportion to your assessment of value, from infinity downwards, will be the nature and character of your belief in Him.

There is one more point of view that arises in connection with the moral and historical outlook. I said that each one of us, who is worth his salt, frames a conception of the ideal self he would fain be in act and deed, and of the ideal community to the realization of which he desires to contribute. What is this community thus idealized? Has it any existence apart from the constituent men and women? Perhaps you will say that it is a generalized conception derived from the net results of your experience of particular individuals. Granted, as a matter of psychological genesis. But do you not feel that, apart from the scientific treatment of this genesis, there is something lying behind, of which all these several men and women are the expression? Speaking for myself I cannot do away with the conviction that this evolving humanity has, for my endeavors, a value in a sense independent of the constituent folk. And I can only explain it, on my metaphysical assumptions, by regarding human life as the manifestation of an underlying Purpose to which my own purposeful acts are related. And since my relations to the several units are touched throughout with moral value, so also the relation of my will to that which underlies. humanity assumes a value of like order.

We thus reach the conception of Pur-

pose as underlying the relationships of human life. You and I are independent but connected terms within a purposeful scheme, related to each other and to the Purpose as a whole. But the doctrine of evolution has led us to acknowledge the unity of phenomenal existence; hence we see behind the whole process of evolution, inorganic, organic, and super-organic or human, one pervading Purpose and conceive the underlying Spiritual Cause as throughout purposeful.

It only remains to add a supplementary paragraph which, I fear, must be so brief as to contain merely an indication of the further development of the conception of purpose. In the first place, I would urge that science, as such, has nothing to do with purpose. Such a teleological explanation is for philosophy, not for science. In the second place, that which lies behind the occasionalism of experience is now seen to be the underlying Purpose. In other words, there is a self-existent scheme or plan, of which experience is the limited manifestation, and to the understanding of which science steadily contributes. In the third place, within experience, as cognitional, these are subjective and objective aspects both belonging to the phenomenal order, both conditioned in time and space. both susceptible of scientific treatment. Thus all our knowledge is phenomenal. but the thought which underlies it is that of which knowledge is the conditioned expression. The actions of men are likewise conditioned, but the will of which they are the expression is part of the metaphysical scheme of And pleasure, love, desire, purpose. moral and intellectual satisfaction are causes in the metaphysical and not the scientific sense. They are not merely the antecedents of human endeavor, but their raison d'être within the purpose to which they contribute. this close intermingling of the scientific

and metaphysical elements in human life which makes a treatment of psychology difficult, and of ethics wellnigh impossible, on strictly scientific lines, in terms of observed antecedence and sequence barely accepted as matters of fact; and it is the realization of this which forces the interpreter of human life and experience as a whole to call in the aid of metaphysics to supplement the incomplete conceptions of science.

V.

You ask me to write you one more letter to indicate the bearings of what I have before written on the questions of immortality and of free-will. Knotty problems, my friend. All I can do is to draw your attention to certain points of view. The problem of immortality is one that I cannot solve.

Let us turn, then, to a point of view which may or may not be helpful to VOII. We have seen that it is of the essence of the conception of an immanent Cause that, though manifested in space and time, it is itself spaceless and timeless. If, then, we accept the metaphysical assumption of Will as that which unifies the whole of our individual experience and the whole course of our bodily life; if we regard the organic changes from infancy to age and the mental development from start to finish as expressions in space and time of this unifying Cause, as personal Will, then we are bound to confess that this metaphysical basis of our being exists sub specie æternitatis. This, I think, is the direction in which our abstract conception of immortality must develop if it is to keep in close touch with metaphysical thought. Just as eternity is not time indefinitely prolonged before and after, but the timeless is, so is immortality no mere indefinite prolongation of the time sequences of our mortal life. We are, not shall be,

immortal. This body, this series of mental processes, these temporal and spatial manifestations may pass away. But that eternal essence which is of the spiritual order dwells serenely in the now which is for ever. This view may be difficult of acceptance, especially to those who are unaccustomed to metaphysical thought and find it hard to realize its fundamental conceptions. The man of science may laugh it to scorn, or may quietly ignore it as wholly outside the range of his interpretation of nature. But it is nowise antagonistic to that interpretation; and true or false, he should have no quarrel with those to whom it may appear helpful as a supplement to science. And do we not practically feel that certain acts, as expressions of character, have a value independent of the immediate circumstances of time and place?

Whether such a view suffices to meet certain needs and cravings of plain practical folk is quite another question: I think not; but you want a metaphysical basis. We should bear in mind that the conceptions of the spiritual life which are founded not on science but on metaphysics find but an inadequate and incomplete embodiment in language framed chiefly to record and condense our experience as conditioned in time and space. The history of religious thought shows how long and difficult has been the task of giving to such conceptions a fitting expression. We are often forced to convey in terms of temporal experience the essential truths concerning that which underlies experience. And some of us hold that it is better that they be thus inadequately conveyed and of necessity imperfectly grasped, than not conveyed or grasped at all. Better the conception of a future life beyond the grave, as a no doubt imperfect and limited embodiment of the metaphysical conception of existence sub specie æternitatis, than

our crude denial of any form of spiritual existence. For, in accordance with its boasted agnosticism, science has no grounds for such denial. Its vaunted ignorance may teach it to ignore, but should restrain it from denying.

Returning, however, to our point of view that we are immortal as emanations from the eternal Spirit, that the kingdom of heaven is within us (read carefully your fourth Gospel), have I anything further that is helpful to suggest? I know not. This I know; that, do what we will, for most of us the experiential attitude towards immortality as in some way future is not likely to be eradicated by a touch of the metaphysician's wand. Some there are, no doubt, who assure us that they neither desire nor hope for any such existence. Others there are who rest content with an attitude of hope and trust. Are you among that number? Do you feel that this hope has value for the conduct of your present life? Then I should say:-Stick closely to your sense of value just as long as it is of real service and help. And for the rest trust, if you may not believe. In a word so act that if, in some way that we do not understand, that which, with our limitations of conception, we speak of as the future life should be realized, you will have no cause to regret your action. I will not say more lest I should seem to fall into a moralizing vein.

As to the freedom of the Will, a few words must suffice. It is a well-worn topic—well-nigh worn threadbare. Science stands for determinism all along the line; determinism alike in the chain of objective experience, and in the subjective aspect of that experience; determinism alike in the physical world and in the world of mental process. For science there is not and cannot be such a thing as free-will. The question, then, comes to this:—Is there any necessary antagonism between the

determinism of science and the freewill of metaphysics? No doubt freedom and determinism are often regarded as antithetical. The true antithesis of freedom, however, is not determinism but external constraint. My Will is free to give expression to my character just in so far as I am not thwarted by constraining influences as other expressions of the universal Cause. Within these limits I am free to determine; and such freedom cannot be antagonistic to determinism which refers to that which is determined. You must not fall to note, however, that the freedom thus claimed by the metaphysician is freedom to act in accordance with the essential nature of the underlying Cause. Of this essential nature determinism is the expression. Hence metaphysicians speak of freedom as self-determinism.

But just as many advanced exponents of science steadfastly oppose the introduction of metaphysical links in the midst of a causal chain of determinate sequence (to account, for example, for the genesis of protoplasm or the origin of mind) so, too, do they refuse to allow free-will as a link in the chain of mental phenomena as these processes are interpreted by the scientific psychologist. But this the metaphysician who assumes the attitude I have indicated does not suggest. He, too, has no sympathy with occasional interference. For him free-will is not merely introduced now and again to help a lame interpretation over a stile. It underlies the whole course of mental procedure, and does not merely pop in, at times of difficulty, like the fairy in a pantomime. It is the metaphysical source of that character which the scientific psychologist must take into consideration when he claims that, given the character (hereditary and acquired) and the circumstances, the act is determined by their interaction. The metaphysician is not antagonistic to this view; he merely

supplements it by urging that free-will is the determining influence in the character as thus manifested. And the qualification free is introduced as a protest against determination in the sense of external constraint.

You may at first, if this point of view is at all new to you, find some difficulty in reconciling such determinism as is demanded by science with human responsibility. But the difficulty some of us feel is that of reconciling responsibility with any other view. On what does the determinism of science rest? Surely on observed uniformity. what does it rest in the field of conduct? Surely on the uniform activity of a given character. Just in so far as my character forms a coherent system, just in so far as my freedom lies in the absence of determination by anything outside the character itself, can you hold me, that is my character, responsible for its acts. Suppose there is no such uniformity, suppose that incoherence takes the place of coherence, so that my acts to-day are no manner of guide to the nature of my acts tomorrow; will you not say:-Poor fellow, he is mad, we cannot hold him responsible for any of these acts? But in all this you must notice I am identifying myself with my character. The question is often asked:-But after all is not a man free to determine his own character? This question, however, has no meaning for one who has accepted for good and all the doctrine of immanence, unless, indeed, the word character is used merely in the scientific sense of that which is manifested, and is not applied, as I am applying it here, to the metaphysical ego, that free spirit which determines the outward expression in conduct.

And here I must stop. If you do not catch my drift of thought from these few words I fear that further discussion, unless at far greater length than is possible here, would be of little

service. There are other questions you raise which I have not now space or time to enlarge upon. You ask: What is evil? In return, I ask you: What is dirt? You know the old definition:-Dirt is good matter in the wrong place. Apply this in your consideration of evil. You ask: How are sorrow and suffering to be accounted for? I appeal to your sense of value, and ask you to consider whether or not there is any true meaning in the phrase "made perfect through suffering," and whether Christ would be for you, what I trust He still is, if He were not a Man of sorrows. I cannot enter further into these matters. I can only add a valedictory word or two. If in any sense you retain a belief in God, remember that He reveals Himself to different men in different ways. Do not be impatient with me if I have urged points of view which do not appeal to you.

Do not be impatient with what may seem to you the narrowness of certain religious opinions. Do not even be impatient with Atheism. I have met many Atheists whose moral life has been not only irreproachable, but noble. And I have sometimes thought that perhaps, after all, what seemed to me their limitation of view was just a means of concentrating their efforts on right living, and, therefore, for them, productive of good and not bad results. For when all is said and done, right living may outweigh many a crooked twist of thought. This, then, is my last word to you. Solve if you can the Riddle of the Universe, and cherish your religious beliefs, just in so far as they do not conflict with other beliefs, and, above all, just in so far as they appeal to your sense of value in the conduct of life.

C. Lloyd Morgan.

The Contemporary Review.

THE WAR IN THE FAR EAST .- II.

THE FORLORN-HOPE AT KINCHAU.

Chefoo, June 1904.

Three Japanese infantrymen leaned with their backs against a greasy searock, which raised its slimy crest four feet above the level of the water. The three little men were fortunate, since they were able to rest their rifles on the rock, while the less fortunate of their companions, waist-deep in the water, were wearied to death in keeping the breeches of their pieces out of the brine. The three seemed entirely indifferent to the discomfort of their surroundings, though the whole company had been wading in the mud-flats for the last three hours, and had now halted in a deep pool formed in a sand depression. They were engaged in a comparison of their experiences during the last twelve hours. To the

Western soldier the experiences of a lifetime would have been covered in the short space of time taken by the 4th Division of the Imperial Japanese army to carry at the point of the bayonet the walled town of Kinchau. To the Japanese soldiers it was but a delightful incident in the service which their country required of them. Their theme at the moment was the bloody grips they had been engaged in during the morning's street-fighting in Kinchau. Nor was it idle boasting, since the stains on the bayonet-catches of their rifles, blackening in the sun, gave sickening evidence of the carnage at which they had assisted. But the carnage behind them was nothing to that which they were to engage in before the sun set. At the moment the three

little blue-coated soldiers appeared to take no interest in the lesser holocaust which was even yet taking place in the vicinity. They were discussing the past, which had been washed more vividly scarlet than the present, between the mouthfuls of sodden boiled rice which they scooped in handfuls out of the wicker satchels suspended to their belts. Such is the character of the Japanese soldier.

There was a terrifying rush of a great projectile above their heads. A hissingplunge, a half-subdued report, lashings of blinding sea-spray. The thick ranks of the company fell aside like driven skittles, and five helpless masses of human flesh bobbed convulsively in the water, which in patches showed yellow, brown, and red. A shrick of derisive laughter from the spectators who picked themselves whole from the mélée was all the dirge vouchsafed to the victims-more, it was all they would have desired. Mahtsomahto, the Nagasaki recruit. leaned forward from his rock and picked up the cap of one of his fallen comrades. He fitted it upon his own head to replace that lost in the early morning struggle. action appealed to the simple humor of those round him; they clapped him on the back and bubbled with mirth in the ecstasy of their congratulations. mutilated remains floated clear, and the ranks closed up.

Then an officer came wading through the sea. He shouted an order to the colonel of the battalion. Another order passed from mouth to mouth down the line of company officers, and then the three little infantry-men had to stow their rice-baskets away quickly and take their rifles from the rest which the slimy rock gave them. The battalion was to move. Where and how the men in the ranks did not know; but as the water descended first to their knees and then to their ankles, they realized that they were moving off to

the left, and to their great joy the direction was taking them nearer to the Russian position. As their feet made the dry shore that position became defined to them. There was no mistaking it, for the gunboats, having spent the whole morning dragging for blockade-mines in the bay, had now found a channel by which they could safely take advantage of their light draught, and, having anchored, their shells were bursting all along the summit of the slope which frowned in front of the advancing infantry; also, far away to the left, the dark shadow of Mount Sampson's slopes was emitting countless little jets of flame. They came and went almost with mathematical precision. These jets were the burning charges of the massed Japanese field-batteries. They were adding to the Inferno which crowned the ridges where the Siberian Rifles, grim, dogged, and hungry, lay prostrate behind the filled gabions waiting for the climax which they knew this fierce cannonade but prefaced. The advancing infantry could trace the enemy's position from the bursting of the Japanese shells, as minutely as if they were reading a chart. They could see the great column of lurid smoke and flame shoot upwards as some 6-inch projectile struck the tip of the parapets, and as the smoke from these explosions mushroomed out and hung as a murky pall above the works, the darker patches were mottled with the white smoke-discs of bursting shrapnel. The din was deafening, for underlying the deeper detonations was a ceaseless crash of small-arms, punctuated with the grinding rattle of automatic weap-

The infantry battalion began to crawl upwards as its direction brought it under the cover of the ridge. It was now crossing ground recently held by the leading battalion of the 4th Division. The ranks frequently opened, to

avoid trampling upon the trail of human suffering which marked the accuracy of Russian shooting. The head of the 4th Division had been massed so thickly behind the ridge that, at a glance, it was possible to tell the nature of each projectile that had caused the ruin. Here an 8-inch Obuchoff had swept a dozen valiant little bluecoats from their feet, and they lay a mutilated mass; here automatic and mitrailleuse had mown down a file of men, and they lay prostrate or sat self-dressing their wounds much as they had fallen; and here solitary yellow faces, turning tawny gray in death-tint, told of the Berdan pellet through the brain. Some few with lesser hurts than the majority raised their weakening limbs to cheer their comrades on, and there seemed to be no tongue, excepting those for ever still, too parched to articulate "Banzai!"

"Banzai! Banzai! Banzai!" shouted Mahtsomahto and his comrades with him as they leapt from side to side to avoid a prostrate form, or, little recking of the pain they caused, in passing seized and shook some outstretched hand. Who shall stop such soldiers! What force under heaven can stay men who go forth to battle in like spirit! Look at the battalion as it passes beneath you. Look at the midday sun glinting on the points of the fixed bayonets; looked at the dull black stains at the root of those same bayonets-who shall stop them! Wait, in war there is time for all things!

The companies deploy and lie down on the unexposed slope of the knoll—it is nothing more than a knoll—and its summit is swept with a race of nickel, steel, and lead. As the men look back they see, after the last company has deployed and is flat behind them, that they themselves have doubled the human wreckage on the plain. Like the desperate players that they are, they have doubled the stakes.

The play is high; but they will have to play higher yet before the game is won-or lost. The colonel is kneeling at the head of his prostrate battalion, a dark little staff-officer kneels at his side. The whistle summons the company commanders. Upright they stride over the reclining men. What the colonel says the men yet do not know: the majority do not care; they are lying on their backs taking in the wonderful scene behind them. In front of them are only Russian field-works, which are contemptible, and glorious death. Behind them unfolds the panorama of their beloved country's strength, power, and--what perhaps does not appeal so much to them,-devotion. To the left is the great blue shallow bay in which until recently they were standing. The middle distance is broken by five gunboats, whose war-dulled hulls sparkle with the constant flashes from the guns. The dirty smoke from their funnels, driven southwards, mingles with the great sombre pall above the Russian works, so that the bright sunlight is scarred with a band of sullen black. Half a dozen torpedo-boats are circling in the roadstead, worrying spitefully, like terriers at a wolf at bay, willing to strike, yet conscious of the power of this particular enemy. Well may they be cautious, for the surface of the water is torn into spits of foam, as projectiles fall without intermission in and amongst the ships. But it is on land that the panorama is more impressive. Behind the prostrate troops, from their very feet, almost as far as eye can reach, the narrow tongue of land is packed with masses of infantry. The sun runs riot upon acres of bared and flashing bayonets, right away as far as the mud walls of Kinchau, which those very bayonets had won that morning. Men and horse, fifty thousand men, massed for the fleshing, suffering death at random-a target impossible to miss

—until the moment shall arrive for them to put their crude patriotism to the final test.

The company officers return to their commands, and the word passes down the line that the battalion, together with the sister battalion lying parallel with them on the left, is to assault the nearest of the Russian works. "Open up the Russian forts" is the expression used, and a suppressed murmur of "Banzai!" flickers down the ranks as the men raise themselves on to their knees.

"Right shoulder" a little. It is useless to make men climb the steeper portion of the peak. "Right shoulder!" and the easier path over the saddle will be found. One minute, and the men can almost feel the rush of air from the race of projectiles passing immediately above them; the next, and through the gaps torn in the ranks of the company in front of them they see their goal, and intuitively make mental measure of the distance to be crossed. Two hundred yards to the bottom of the dip-here the scattered buildings of a fishing village—and then four hundred yards of gentle climb to that sky-line, with its demarcation of unceasing flashes and its dull yellowgray curtain of clinging pieric cloud. Above the thunder of battle-the crash and rattle of the guns-the grinding of the automatic death-machines-and the sickening swish of metal sweeping poor human frames by scores before it, -rises the full-throated war-cry of Japan-Banzai!- "Live a thousand years!" and almost before the men have realized that they are facing a tornado, those that have not been stricken down have reached the cover of the village. But what a trail they have left behind them: the rearmost companies have to open out and direct to right and left, for the slope is a mosaic of prostrate The crash and racket on uniforms. their front intensifies, and beneath the

rain of projectiles the meagre walls of the village crumble and subside. haze of sun-baked mud-dust rises from the subsiding pile, and, clinging in the dead air, covers somewhat the carnage in its midst. . A pent-house falls and crushes half a platoon beneath it. A bevy of terror-stricken women and children, bolted by flame, shell, and sights of death from their hiding-places, dash blindly for the open-a moment, and they too swell the tale of massacre. The full-throated war-cry of Japan is dead. A thin wail of Banzai! goes up, an officer seizes the emblem of the rising sun, and, bending low to meet the leaden blizzard, dashes for the slope. Where ten minutes ago he had had a company to follow him, he now finds ten or fifteen men. To right and left little knots of desperate infantrymen dash out into the fury of the blast -only to wither before it. For perhaps ten seconds the color is erect and falters onward. Then it is down. Mahtsomahto is at his captain's heel: he seizes the loved emblem and raises it again. He turns back to wave it, and is swept from his legs; he struggles to his knees; the flag is upright again, for one second only, and then as if by magic the firing stops, and for one second the Russians jump up upon their works, and wave their caps and shout the shout of victory. The two Japanese battalions which furnished the forlorn-hope had ceased to exist. The Russians cheered, and then the Japanese supporting artillery reopened, and the struggle returned to its normal state. The forlorn-hope had failed-but what did that matter: were there not thousand as good infantry forty massed behind the ridge, prepared to carry on the desperate work which the two lost battalions had begun?

By sunset the Japanese had carried this work, and the whole line of Russian defences went with it.

GEORGE FREDERIC WATTS.

By the death of Watts England has lost not only her greatest painter, but one of the noblest figures of the age. As an artist he stands foremost among his peers. During the past century there may have been masters who surpassed him in the actual handling of paint, who knew the tricks of their trade better, and showed greater skill and dexterity in the practice of their craft. But in conception, in style, in color, in the expression of human emotion, in all the highest qualities of art, he is quietly supreme. When the bulk of his life-work is brought together, as it was eight years ago at the New Gallery, we see for ourselves how wide and varied was the range of his creative powers, how assured was his grasp of the great principles of design, and how clear his insight into the many sides of pictorial art.

Everything about Watts was on the same grand scale. His noble presence, the force and elevation of his character. the splendor of his generosity, the largeness and simplicity of his conceptions, the imposing dimensions and monumental grandeur of his works, the vast amount of his production, the long roll of his years-all these were calculated to leave a profound impression upon the mind of his contempo-No man cared so little for raries. honors and rewards, no one set so little store on social distinction or personal fame. But although he led a secluded life and was rarely seen outside the walls of his home, his influence has been widely and powerfully felt by the men and women of his generation. No painter of modern times has filled so large a space in the public eye, none has been so much honored and beloved by his countrymen. His death, as

might be expected, has stirred the heart of the nation to its depths, and during the last few weeks tributes to his praise have poured in from the most unexpected quarters, and universal homage has been paid to his memory.

The imposing character of Watts's genius, the power and charm of his personality, made itself felt at an early period of his life. From his boyhood it was ever the same. His father, a struggling musician, whose portrait was one of young Watts's earliest and most successful attempts in this line, and who died when his son was sixteen, always declared that the child would grow up to be a remarkable man, and proudly showed his sketches to the employers whose planos he tuned to earn a living. When at fifteen the boy entered the Academy schools, he produced the same effect on his There are artists still companions. living who remember the vivid impression left on his fellow students by the lad during the few weeks that he had spent among them, and the stories that were still told of his genius and enthusiasm. When, in 1842, he entered the competition for decorating the Houses of Parliament with frescoes. and won a prize of £300 for his cartoon of Caractacue, there was a general feeling that the award was just, and that the young painter's exceptional talents deserved recognition.

Like many other artists of genius, Watts was practically self-taught. From the age of sixteen he never had a single lesson, and never owned a sixpence which he did not earn himself. The Elgin marbles, he always declared, were his real teachers, the models from which his sense of form and style was derived. They inspired him with that

intense admiration for Greek art which was one of the most lasting passions of From childhood the very his life. name of Greece thrilled him as nothing else could do; and when in old age he visited Athens and saw the very Nature, steeped in celestial blue, which the old Greeks had peopled in their imagination with forms of gods and heroes, he felt that one of the most cherished dreams of his youth was realized. Long before this he had given expression to the same thought in his painting of the Genius of Greek Poetry, that image of a strong-limbed youth resting on the shores of a sunlit sea, gazing intently on the shadowy forms that float through the golden air. This love of Greek myths became the source of a whole series of paintings on classical themes which were marked with the painter's finest qualities and contain some of his deepest thoughtthe exquisite figure of Psyche abandoned by her lover, Orpheus and Eurydice, the most passionate and dramatic of all his works, and the luminous visions of the Goddesses Three on Ida, or Endymion and Diana, of which the latest version now hangs in the New Gallery. From the Greeks Watts acquired, on the one hand, the grandeur of his style and the broad and sweeping lines of his forms, while on the other he learnt that deep sense of the beauty and sacredness of life and that serene contemplation of death which he strove to set forth in his great allegories.

Nothing, indeed, is more remarkable than the continuity of motive and aspiration which marked this great master's whole life. His aims never altered; his endeavor scarcely changed; the very subjects which attracted him in his youth were those upon which he was engaged until the last day of his life. The first picture which he ever exhibited at the Royal Academy—in 1837, the year of Queen Victoria's ac-

cession-was that of A Wounded Heron. It was a forecast of that sympathy with suffering creatures that marked his whole career, and which prompted him in his last years to paint the picture of the angel weeping over the torn plumage of bright-hued birds sacrificed to the uses of vanity and worldliness, and to take an active part in the movement for the suppression of this cruel custom. For the rest, birds always had an especial attraction for him, and, on one of the last visits that I paid him, the aged painter grew eloquent on the close connection that exists between birds and human beings. Like ourselves, he explained, birds are travellers and architects; they are endowed with an articulate voice, with fulness of life and rapidity of movement, and are given wings with which they can soar heavenwards! So they become divine teachers, who set forth the true meaning and significance of life.

Watts always looked back to the visit which he paid to Italy after winning the prize for his cartoon in 1842, as the great opportunity of his life. Those four years which he spent in Lord Holland's house at Florence not only enabled him to become familiar with the masterpieces of Italian art, but introduced him to cultured society, and prepared the way for much of his future achievement. In Lady Holland's salon he made friends with men of the highest intellectual rank, with political celebrities and authors; he met Thiers and Guizot, Panizzi and the Orleans princes, the Princess Lieven and Lady Dorothy Nevill, Thackeray and Dickens, and painted portraits of the leading statesmen and fairest women of the day. He studied the works of Titian and Veronese, caught the secrets of Venetian color, and formed his technique on their pattern. Venice itself he never spent but a single week, but the picture which most impressed him there was Tintoretto's

Crucifixion. Giorgione's paintings charmed him by their exquisite grace and melody; in this short-lived master he recognized a true Greek who came nearer to the ideals of Phidias than any other Italian painter. On the other hand, Raphael interested him deeply as the interpreter of classical antiquity to the Renaissance, the designer of frescoes on a monumental scale, although he sighed over the burden of work which brought the Urbino master's life to an untimely end, and the quantity of bad painting which was allowed to pass under his name. Once in Rome, he could look at nothing but Michelangelo, the painter of all others with whom he had the most in common, and whose works he was never tired of studying. But while the young English artist studied the great Italians attentively, he never copied their works. He was already busy with conceptions of his own, and while he stayed at Villa Careggi with Lord Holland he painted a second cartoon, Alfred's Naval Victory over the Danes, which this time won a prize of £500 from the Government. Fired with this success, Watts came back to England, full of noble dreams, and eager to proclaim the great thoughts that were burning in his soul. Already he had been painfully struck by the degenerate state of art in England, and had realized that the conditions of modern life were distinctly unfavorable to the growth of its nobler forms. Painting was looked upon as a luxury for the wealthy, a pastime for an idle hour, which had no object but to please the eye and amuse the mind. To raise the tone of art in England and make it more worthy of the nation became the aim of his life. "I paint," he often told us, "first of all because I have something to say." And since the gift of words, he always maintained, had been denied him, he sought to deliver his message to the world through the

medium of painting, which he was convinced had an office and mission of its own. "My intention," he once wrote, "has not been so much to paint pictures that will charm the eye as to suggest great thoughts that will appeal to the imagination and the heart, and kindle all that is best and noblest in humanity." And in another letter of 1895 I find the following passage, which clearly sets forth the writer's belief in the high mission of art:

My work is a protest against the modern opinion that Art should have nothing to say intellectually. I think it might say a great deal. I even think that in the future, in stronger hands than mine, as great poetry itself, it may speak with the solemn and majestic ring of the old Hebrew prophets who spoke to the Jews, demanding noble aspirations, condemning in the most trenchant manner prevalent vices, and warning, in deep tones, against lapses from morals and duties. There is something more, I believe, to be done than has yet been done in the past. Perhaps echoes of this spirit may be found in Wordsworth, Ruskin, and Carlyle, more than in any other writers.

This we feel is exactly what Watts himself tried to do in his own art, in which the great spiritual truths of teachers such as Carlyle, Ruskin, Tennyson and Browning are reflected and embodied. We are not now inquiring how far he succeeded in his endeavor, or whether it was possible to give utterance to his ideas without doing violence to his art. All we are concerned to show is the object of his endeavor and the lines on which he worked as laid down by himself. Art he felt convinced, was a divine voice, uttering through all time its message to mankind, occupied with spiritual truths and the destiny of the human soul, the handmaid of Religion and of the State, in Charles Lamb's words, "human in its instinct, imaginative in

its range, and infinite in its significance."

The revival of mural painting and the decoration of blank walls as the best means of educating the public taste, was at this time the great object of his ambition. With this intention he painted his fresco of The School of Legislators in Lincoln's Inn Hall, and offered to decorate the railway station at Euston, with paintings on the progress of the human race, at his own expense, an offer, which, as is well known, was declined by the Directors. It is less generally known that at one time, in Dean Milman's days, Watts designed a completé scheme for the decoration of the dome of St. Paul's. The vault of heaven, with the planets, stars, and signs of the zodiac, was to be figured above, while the companies of prophets, apostles and martyrs were to appear in circles below. The conception was a grand one, but the scheme was never carried out, much to the artist's disappointment. Another of his favorite dreams was that of a temple or House of Life, adorned with a series of symbolical frescoes of the mysteries of life and death, "a Sistine Chapel," he used to say, which should contain all his great visions. But the opportunity was denied him, and a chance, such as seldom comes twice in a nation's history, was thrown away. The country was indifferent, his best friends were unsympathetic and incredulous; even Ruskin, who afterwards paid Watts a splendid tribute as the painter of mythical subjects, shook his head at the idea of allegorical designs, and advised him to stick to portraits. Nothing but the strength of a great purpose could, as he often said, have borne him through these long years of loneliness and misconception. But he was content to bide his time, and although he painted a few more frescoes and pictures for private patrons, and designed cartoons which

remained in his own possession during many years, he never exhibited anything but portraits. His activity in this direction and the extraordinary success which attended his efforts are known to all. He was compelled to paint portraits in the first place to gain a living, but independently of circumstances he always declared that portraiture was the best discipline for an imaginative painter, since by this means he was forced to avoid mannerisms and keep close to Nature. But although his rare merits as a portraitpainter were evident to all, Watts received little encouragement from the official heads of painting in England, and he was not elected an Associate of the Royal Academy until the year 1867, when he was fifty.

Through all failures and disappointments he never swerved from his high purpose, and with all his sympathy for the work of others, never allowed his own aims and practice to be altered by their influence. He was closely connected with the leaders of the pre-Raphaelite movement, and lived on intimate terms with Rossetti and Millais, whose portraits he painted at this period; but, deeply as he admired their earnestness and sincerity, he never joined the brotherhood. His knowledge of great Renaissance art was too wide for him to accept the narrow limits of their creed, and his own individuality was strong enough to resist even the magic of Rossetti's spell. Ruskin again inspired him with profound admiration, and he always regretted that he had been unable to paint the great writer's portrait for his series of celebrated Englishmen. But of all the brilliant group who gathered round Rossetti in the fifties and sixties, Burne-Jones was the one whom he loved the best, and whose genius he admired the most. painter of the Days of Creation remained his intimate friend to the last,

and Watts always declared him to be the greatest of living masters, much as he lamented his friend's dislike of the modern world, and constant habit of seeking inspiration in the past. Watts, on his own part, always remained himself, and was essentially a man of his times. He did not turn away with a shudder from the present, or look back with wistful yearning on the Middle Ages or the early Renaissance. Whether he painted allegories or Greek myths, whether his theme was classical or Biblical, suggested by Arthurian romance or drawn from Bolardo and Dante, the sentiment embodied in his works was essentially modern in character. He was thoroughly in sympathy with the age to which he belonged, and the ideas which he expressed in his art were those of the present day. This is nowhere more evident than in the great series of allegories on Life and Death which he painted during the last thirty years of the nineteenth century, and presented to the nation when the National Gallery of British Art was opened in the year of Queen Victoria's Diamond Jubilee. These noble pictures, so monumental in their form, so profound in their symbolism, are instinct with the doubt and sadness, the anxious questionings and complex meanings of modern thought. He has shown us Love, strong in his immortal youth, guiding the frail, clinging form of Life up the rocky paths which lead to the celestial heights; and Faith, loosing the sword from her side and bathing her blood-stained feet in the waters of Truth as she looks up in the face of the great Father-an image of the large-hearted toleration which can see good in opposite creeds and beliefs. He has painted Hope seated blindfold on the globe, in the dim twilight of the world, seeking to draw music out of the last remaining string, and bending down over her lute to catch

the faint sound of the melody for which she yearns. And in his different representations of Death he has given us the finest conception of the unknown reverse of life ever set forth in pictorial art. We see her as the fair, pale woman throned by the side of Time, the strong destroyer, consoling and reverent, yet touched by inevitable sorrow, looking down on the flowers that are gathered in her lap. We see her as the pitying Angel folding the child in an embrace tenderer than that of any mother; and as the blessed Messenger who lays his hand gently on the shoulder of the tired sufferer and bids him come. Again, in his most famous picture, Death appears as the solemn, white-robed form, with bowed head and veiled face, advancing with resistless might into the house of life, while Love struggles vainly to bar the way. When this picture was first exhibited at the opening of the Grosvenor Gallery in 1877, it took the world by storm, and the nation at length realized that Watts was something more than a successful portrait-painter. A distinguished French writer, M. de la Sizeranne, confessed that the works of this English master had first made him believe in symbolic painting; and even the modern school of critics and artists who resent the intrusion of ideas in art recognized the high qualities of Watts's work, and owned that, in spite of his mistaken aims, he was a great painter.

But as years of neglect and isolation had failed to embitter the sweetness of his nature, so this long-delayed recognition could not change his character. In the hour of triumph, when the world was at his feet and the greatest and proudest of mankind were eager and ready to do him homage, Watts remained, what he had always been, the simplest and most humble of men. Nothing, indeed, was more remarkable about our great master than

the personal humility and self-effacement which formed so striking a contrast to the loftiness of his aims and the passionate strength of his convictions.

Of course [he wrote to me in 1895] it will give me great pleasure if you will write a monograph on the objects of my art, because from the number of letters which I receive from people whose opinion I have a right to value highly, and from perfect strangers whom I never saw or shall see, I am encouraged to believe that it would be worth expending time upon the endeavor to make my intention evident. But I should not like praise for pictorial achievement that Time may not endorse. I wish, as I told you, to have some description of the pictures which I have painted with the view of leaving them to the nation, as all the friends who were personally acquainted with my intention and with the works already completed are dead, but I do not wish to have my insignificant self thrust forward. . . Only two things I am anxious about-one, that no comparisons should be instituted between what I try to do, and what other artists achieve-those who care for the direction of my efforts must not lay claim to any great artistic success on my part; the other, that no accusation of neglect or injustice should be made against any of my fellow countrymen.

Closely akin to this natural diffidence and humility was the sympathy and interest which he felt in the works of other painters. There was no trace of egotism about him. He recognized the great qualities in the work of artists whose aims and practice were wholly unlike his own. I have heard him speak with the warmest admiration of Leighton's draughtsmanship, or Millias's power of handling paint, and praise Whistler's Mother and Carlyle, or Mr. Sargent's portraits in the highest terms. The same generous sympathy was extended to the most obscure and unknown artists whose work

he thought worthy of praise. Sometimes, indeed, in the warmth of his heart the veteran master was so lavish of his commendation that one felt inclined to suspect him of a lack of critical faculty. But if this was really a fault in him, it was a blessed one; and who can doubt that his generous praise fell like the dew of heaven on many a dry and barren place?

At least the sincerity of his praise was proved by the generosity of his acts. No one ever gave more widely and liberally, with such free and royal splendor. If a scheme was set on foot for presenting a picture to the National Gallery by some painter whose merit had been hitherto scantily recognized, Watts was the first to head the list with a liberal subscription; if a promising child seemed to him deserving of better training than his parents could afford, or a struggling artist had left his widow and family in distress, Watts was sure to hold out a helping hand. His daily actions were a living illustration of his belief in the old German motto which the Queen of Roumania, Carmen Sylva, suggested to him as the text of one of his most touching pictures: "What I spent, I had; what I saved, I lost; what I gave, I have." "Our little life," he wrote once, "is poor indeed if bounded by our own personal wants and fancied requirements." Among countless instances of his generosity I will only name one, which he often recalled because of its connection with his picture Love and Life, a work which he considered his most important message to the world. A poor artist's wife, whom he had never seen before, came to his studio in sore distress one day and begged for a loan of a few pounds to enable her to join her husband, who lay dangerously ill in New York. Watts gave her all, and more than all, she asked, and she left him with tears of gratitude in her eyes, promising to

come and see him on her return. Two years afterwards she appeared accompanied by her husband, who was restored to health and had found work in America, and repaid the money which Watts had lent her. When the painter asked what had led her to apply to a total stranger like himself, she replied. "The sight of your picture, Love and Life." She felt that the man who had painted that picture must have a heart overflowing with love and pity for sorrowing humanity, and the issue proved that she was right. And as in small things so in great. Watts gave several of his noblest paintings without a thought to provincial museums and galleries. version of Love and Life went to New York: another to the Luxembourg, where it has been the object of the utmost admiration on the part of French critics: one replica of Love and Death, which had been valued at £3300, was presented to the city of Manchester; another important picture, Fata Morgana, was given to Leicester. Happy Warrior, that beautiful and inspired vision which is one of Watts's most popular works, was lent to an Exhibition at Munich, and finally allowed to remain there, at the urgent entreaty of the Bavarian artists, who could only afford to give a nominal price for And it was the same the picture. when, in 1897, the Dean and Chapter of St. Paul's were anxious to place one of the master's pictures in their great Cathedral. He had not been inside St. Paul's for fifty years, and knew none of the members of the Chapter personally; but when their request was laid before him, he never hesitated for a moment, and sent the following letter in reply:

All my work of the most serious intention and character has, for many long years, been dedicated to the nation, as it has been only in this way that I could do anything for the coun-

try I love so well, and which I feel is drifting backwards in so many directions, especially in want of moral earnestness. Therefore, of course, anything I have done must be at the disposition of those who by weight of character or station have a right to dispose of the work. It would give me great satisfaction to have any of my efforts used for a good purpose and the idea of placing a picture in St. Paul's is in entire accordance with my views and objects, if all my works of this kind cannot be kept together, which no doubt is out of the question. But the objection is that an oil-painting requires as favorable a light and surrounding as can be obtained, and I do not think either condition could be found in St. Paul's. . . . The experiment, however, might be tried, with the permission of the Dean and Chapter, with the large picture you mention, Time, Death, and Judgment, which will be at Whitechapel next week. should be thought advisable, I. of course, will waive any objection I could make, too happy, as I said before, to find my work placed where it may serve some good purpose.

It had been the painter's intention, had he lived to finish his great statues or Tennyson and Physical Energy, to paint a new version of Love Triumphant over Time and Death, which should hang under the dome of St. Paul's, opposite to the picture of Time, Death and Judgment, as the natural complement to the former subject. But the needful leisure never came; and to the end, as we know, the master was at work on the two colossal works which took up his whole time and strength during the last years of his life.

If England had treated her great painter with neglect and indifference at one period of his career, Watts took his revenge nobly. He gave her of his best, not only presenting the nation with that grand series of painted poems in which he delivered his message to the men of his generation, but the magnificent collection of portraits of contemporary heroes and statesmen,

poets, painters, authors and philanthropists, who have made England what she is to-day. The series is distinguished by what Mr. Swinburne once called "the splendid and imperishable excellence of sincerity and strength," and will prove a priceles's treasure to future historians of the Victorian age. The same inborn sympathy with his fellow creatures, the same fine perception was the secret of his success in portrait-painting. had a wonderful way of reading the character of his sitters, of finding out their habits and thoughts, and of bringing the whole man before our eves. So it is that he is able to represent men and women of the most different types and character, and show us in turn the intellectual refinement of Mr. George Meredith's countenance, the look of quiet courage and manly resolve on the face of Lord Roberts, the restless energy that lives in Gladstone's mobile features, or the gleam of romance and mystic poetry that lights up Burne-Jones' eye.

In this way Watts was brought into close relations with the most brilliant and distinguished personages of the age, and knew every one who was worth knowing in his time. Many were the stories which the old master had to tell of his sitters. Carlyle, who complained that Watts made him look like a mad laborer; Gladstone, who talked so much and was so eager to learn the painter's opinion on the burning questions of the hour, that his portrait proved a failure; Cecil Rhodes, who died before his picture was finished, but whose grave in the wild Matoppo Hills is to be adorned with a bronze cast of the great equestrian statue which he admired so much. In his candor and guilelessness Watts never shrank from giving his sitters good advice. He has been known to remonstrate with Cabinet Ministers for ill-timed speeches or actions which

he held to be unworthy of their exalted post. He told one artist that he ought to free himself from the foolish preindices which hampered his work: and warned Rhodes solemnly to see that he was numbered among the makers, and not the marrers, of the nation. A thorough-going idealist himself. Watts expected his friends to live up to the level of their art, and was pained to see any inconsistencies in their conduct. "Come. King Arthur would not have talked in that way," he said to Tennyson one day when the poet was in a more bearish mood than usual. But when the Laureate showed him his knotted and swollen fingers, he understood, and felt satisfied that it was "all the gout."

If his own life was clouded by heavy trials and disappointments at one period, the Fates made divine amends to him in the blessedness of his later days, and the companionship of his devoted wife shed a radiance over the great master's declining years. Under her wise and gentle rule, Limner's Lease, Watts's beautiful country home in Surrey, became a centre of gracious and kindly activities, an ideal retreat for a painter of his aims. Those who were privileged to spend a few days in this lovely spot will not soon forget the quiet charm of this little corner of earth which seemed to have dropped out of heaven. Visitors of distinction came from all parts of England and Europe, attracted by the fame of the great artist. No one ever failed to find a welcome there or was sent empty Watts had always been a away. brilliant talker-Gladstone more than once expressed his deliberate opinion that he was the best talker whom he had ever met-and the wisdom and experience of years combined with the freshness and enthusiasm of youth which he had retained in so marvellous a manner, gave a rare charm to his conversation in these latter years. He

read all the newest books and discussed their contents with vigor and animation. The poetry of William Watson and of Rudyard Kipling afforded him great delight, and the lastnamed poet's "Recessional" and "Seven Seas" appealed in an especial manner to his strong sense of patriotism. Tolstoy's earnestness and sincerity never failed to impress him, although he could not accept all his theories, and himself counted war among the inevitable evils of the world, and looked upon strife as "a necessary condition of human progress." Among contemporary foreign painters, Millet had long held the foremost place in his affec-The largeness and simplicity of the great French master's designs, the strong human interest of his work, had for Watts a powerful attraction; and while the tale of poor Millet's struggles and suffering moved him deeply, he always declared that he ought to be envied rather than pitied. There was much, he felt, in common between them, even the headaches from which they both suffered! Music, again, was an unfailing delight to him, especially that of Bach and Beethoven, whose "Marche Funèbre" was played at the memorial service at St. Paul's in the dead master's honor. Many years ago Watts painted a fine portrait of Dr. Joachim, the great violinist, and the last time that he appeared in public was at the memorable gathering in the Queen's Hall, when the Prime Minister, on behalf of a number of friends, presented Dr. Joachim with a portrait of himself painted by Mr. Sargent.

To the end of his life Watts took the keenest interest in political events, and followed every incident of the South African War with close attention. When his old friend Lord Dufferin's son was killed, he sent him a copy of *The Happy Warrior* with his letter of condolence, and rejoiced to

learn how largely photographs of that picture and his Sir Galahad had sold during the war. Education was one of the subjects which interested him profoundly during these last years. He was dissatisfied with the present system, and had plenty of theories of hisown on the problem. Instead of cramming children with facts, he maintained that we ought to give them high ideals of life, and make them realize their responsibility to others. Above all, he was strongly of opinion that education should be distinctly religious in character. The young should betaught to remember that they are children of one Father, and to look on all mankind as brothers and sisters, towhom they owe a distinct duty. want to teach people how to live," hesometimes said, "how to make use of all their powers, to work and hope and enjoy life, not to be mere slaves and drudges, but to care for something higher than money-making and selfish pleasure." It was this interest in the youth of England which made him give the cartoon of his Sir Galahad to Eton College, where it hangs on the chapel walls, to remind Eton boys of the painter whose whole life was one long endeavor to fulfil the words of his chosen motto-"The utmost for the highest."

With regard to artistic training Watts often said that he did not believe in teaching art, and that the best thing was to set good models beforethe student, and to inspire him with a great purpose which no disappointment or neglect could alter. His strong sense of the decay of national taste, and of the deplorable conditions under which the lives of large classes of people are spent, led him to take keen interest in the Home Arts and Industries Association. Both he and Mrs. Watts devoted large sums of money, as well as endless time and trouble, to this object, while Mrs. Watts raised:

and decorated a mortuary chapel and founded a flourishing pottery in their own village of Compton. Another object which the great painter had much at heart was the effort to record the heroism of humble obscure lives which is often allowed to pass unnoficed. With this end in view, a few years ago, he gave a thousand pounds to erect a cloister in St. Botolph's, Aldersgate, commonly known as Postman's Park, which should contain memorial tablets of noble deeds done by English men and women in our own days, such as Alice Ayres, or the brave stewardess of the Stella.

Gambling was, in his eyes, the blackest of all vices, the curse of our nation, and it was against this sin, which is pictured on the wall behind his figure of the prophet Jonah, that his sternest denunciations were lifted. But, although he saw much to lament in the present state of his country, he never despaired of her future. heart of the nation, he was convinced, still beat true, and nothing rejoiced him more than to hear the strong and hopeful words in which his friend and neighbor, Mr. George Meredith, expressed his firm belief in the great work which lay before the English In spite of passing moods of weariness and dejection, Watts himself remained an optimist at heart, strong in the unshaken faith and trust which he has set forth in so many noble paintings, and believing, with his friend Tennyson,

that good shall fall
At last—far off—at last to all,
And every winter change to spring.

During the last years of his life Watts often painted landscapes. From the time when in 1857 he accompanied Sir Charles Newton on his mission to explore the ancient Halicarnassus, and brought home sketches of the sunny regions on the shores of the Mediter-

ranean, he frequently turned his attention to natural beauties. mountains of Carrara and the jagged peaks of Mentone, the Bay of Naples and the banks of the Nile, the summit of Ararat and the hill of the Acropolis were the subject of some of his best landscapes in past days; but of late he has chiefly painted English scenery. the woods and meadows of his Surrey home, Green Summer, and Autumn Sunset, and many more of those exquisite little pieces which we saw from time to time in the New Gallery, as romantic in conception as they were fine in execution. "Every year that I live," he said to me not long ago, "I seem to realize more and more of the beauty and seriousness, the solemn grandeur of Nature."

All his life he had been frail and delicate, "a sickly lad and often a suffering man." Early in his career he realized that unless he devoted himself entirely to work, he should effect nothing. So he made a firm resolve to rise with the sun, live on the simplest fare, and avoid the distractions of society. By strictly keeping to this rule, and giving himself up to hard work from early dawn till dark, this delicate man has accomplished more than the strongest of us would dare to attempt. To the end he worked with the same unceasing ardor, planning new pictures on a grand scale, and undertaking colossal works at an age when other men feel they have a right to think only of rest. He was actually at work, putting the last touches to his great statue of Physical Energy, when the last call came, and a short filness closed the long and strenuous career.

Now the great life is over. The master has laid down brush and chisel and is gone to his well-earned rest. Statesmen and painters, friends and fellow workers, many of the wisest and noblest in the land, met under the dome of the great Cathedral where his

picture hangs, to do honor to his memory, and the next day his ashes were laid to rest in the shadow of the fair chapel which loving hands had reared on the green Surrey hillside. . On the most radiant of summer days we sang the "Nunc Dimittis" over his grave, and left him sleeping under the flowering lilies and tall elms of the home which he loved. In our blindness and ignorance we were loth to let him go. "We are, it must be owned, a little unreasonable," said another venerable painter, now the last survivor of all that brilliant group, on the morrow of his old friend's death. "A great The Monthly Review.

man is given to us, who does many mighty works, and we are allowed to keep him for a longer term of years than usual. And when the end comes, we complain because he is taken away, leaving a few unfinished works behind him." But there is no real cause for grief. Our beloved master is gone beyond the sound of human voices, but he has left us work that will not die and a memory that can never fade. His life will be an inspiration to many in the coming days, and his paintings and statues will live among the noblest monuments of art in this or any age. "Nothing is here for tears."

Julia Cartwright.

LYCHGATE HALL.

A BOMANCE.

BY M. E. FRANCIS.

CHAPTER X.

MIDNIGHT VISITORS.

The sun was setting when we approached the lychgate, and the shadow of the old Hall reached down to us across the lawn and the flagged path.

We both started when Malachi's bent figure suddenly darted out from the gateway, his face wild, his manner full of excitement.

"He's here!" he cried hoarsely.
"Turn about and go away if ye don't want to see 'un."

Dorothy stood stock still, but answered not a word,

"I knowed he'd track ye sooner or later," went on Malachi. "He's kept his word. I told him you was out; he said he knew you was and would come in and wait for 'ee. If I was you I'd make off to The Delf."

"He'd find me there," said she.

She spoke almost in a whisper, and her whole form wavered like a reed in

the wind. Looking in her face I seemed to distinguish the counterpart of the look which I had noted in that of the gentleman in black when she had smiled upon Sir Jocelyn-an expression of anger and despair-yet in her case it was mingled with, almost mastered by, a kind of terror. I was convinced that the mysterious "He" in question was no other than this stranger; his remarks to me, his excitement on hearing the name of Dorothy, his questioning of Stumpy, taken in conjunction with the words let fall by Malachi, pointed conclusively to his identity.

After a moment Dorothy began to move towards the house with an uncertain step; Malachi laid hold of her dress.

"You are never going in," he cried.

"Indeed I am going in," said she, "I must see him. I must get it over, Malachi."

It seemed to me that in her voice was

a note of unwilling joy. It stabbed me, and I was starting to lay hold of her in my turn when, of a sudden, breaking into a run she flitted up the path with an eagerness the sight of which paralyzed me. I saw the great door swing on its hinges and a figure appear in the opening, and then, with a cry, she stumbled forward, and a man caught her and drew her within. In another moment the door was closed again and all was still.

Malachi hobbled up the path before I had time to recover myself, and presently vanished round the angle of the house. I stood rooted under the lychgate, my heart throbbing to suffocation, the forbidding old house opposite to me reeling before my eyes. What was this mystery? Who was this pursuer whose arrival had filled Dorothy with such terror, yet whom she hastened so impetuously to meet? Had he come to press an unwelcome suit? Was the fear which she evidently felt caused by him or by the knowledge of her own weakness? Even my brief acquaintance with him had made clear to me that the man was dangerously attractive; his power over her was evident. Yet perhaps, after all, my jealous heart was unduly suspicious; this might be but some wrathful Kinsman come in search of her; her sudden and mysterious appearance might very well be accounted for by the fact that she had run away from her Family in some freak or fit of temper. But then must she be coerced to return? I swore to myself that I would not permit it. I would remain at hand so as to take her part if need be. In fact I believe no earthly power could have induced me to budge until the stranger reappeared; without pausing to ask myself whether my conduct were honorable or the reverse, I was firmly resolved to watch and wait the issue of events.

After I had remained motionless at

my post for some little time, cogitating over every conceivable aspect of the affair, I suddenly bethought me that this could be no Brother of hers, seeing that their complexion was so different; and immediately the remembrance of certain words of hers flashed across me: "I have no liking for black men."

The stranger was fair enough. And again that very night in answer to my question as to whether there was no man whom she held worthy of trust, she had answered that there was indeed one. This was no doubt he! Pray Heaven she did not trust him too far! And once again a fit of jealous fury seized me.

I can never describe all that I felt and suffered during the ensuing hours; how my heart was in turn shaken by doubt and fear, consumed with anger, overwhelmed with pity, fired with a fierce resolve to avenge her wrongs if need be, to succour her should she call for aid.

It had grown quite dark when, chancing to turn in the opposite direction, I observed a light bobbing along at the further end of the lane, and presently heard rapid footsteps approaching.

I withdrew yet more behind the stonework of the gateway, in hopes that the bearer of the light might pass without perceiving me. This lane was unfrequented as a rule, yet to-night some chance reveller might traverse it in a short cut homewards from the Hall.

The man drawing near, however, turned abruptly in at the gate, setting the wicket swinging in his haste, and as he was for passing me the light shone upon his clothes, and I recognized Sir Jocelyn's fine camlet coat, and his lace and ruffles.

Scarcely knowing what I did, I sprang out of my retreat and laid hold of him,

"You must not go up to the house,

Sir Jocelyn!" cried I. "Mrs. Ullathorne would be much displeased."

He wrenched himself from me with an angry oath, lifting at the same time his lantern so that the light fell upon my face.

"Luke Wright!" he exclaimed, "how dare you address me thus? I'll teach you manners, you young dog!"

"I beg your pardon, Sir Jocelyn," said I, "I forgot myself. I—I scarce knew——"

"Pray, what are you doing here?" he interrupted. "Acting watchman or spy?"

"Indeed I do not know," I faltered.
"I came to escort Mrs. Dorothy home—and I——" I broke off. "Pray, Sir Jocelyn, do not go in," I went on, after a moment.

"Not go in!" he echoed, "and have my walk for nothing. So you connived at her escape, did you, you rascal, taking advantage of my back being turned! But it will not avail her much, for I have come to carry her to the Hall immediately, that she may open the revels there as well as in the Marl-pit."

He spoke excitedly, and though he was as sober a gentleman as any of the neighborhood, indeed far more so than many persons of quality of his acquaintance, I could not forbear thinking that to-night he had been drinking.

"I am sure," protested I humbly, "that Mrs. Ullathorne is tired this evening, and, moreover, she has company."

"Company!" he cried, "What company?"

At this moment we heard the bang of a door, and a dark figure emerged from the house and strode rapidly down the path.

"Confusion!" ejaculated Sir Jocelyn, lifting high his lantern in readiness to distinguish the features of the newcomer.

The latter, who had been advancing with head bent, suddenly perceived the

light, halted a second, and then quickened his pace. I saw his hand fly to his sword-hilt after the momentary pause.

Sir Jocelyn swore again as the rays, first falling upon the approaching figure, discovered its rich dress and elegant mien.

"Whom have we here?" he cried.
"What does this gallant here at such an hour?"

The other was now close to us, and the light revealed to me that his face was convulsed with some violent emotion, and, moreover, unwontedly flushed.

"Sir," cried Sir Jocelyn, in a voice that trembled with anger, "what brings you to this house at this hour of the night?"

"Let me ask you, Sir Jocelyn Gillibrand," returned the other in tones to the full as fierce, "what brings you here? Let me tell you that you have no right to trespass upon the private premises of a Gentlewoman to whom your assiduities are unwelcome."

"Do you say so?" retorted Sir Jocelyn, with a sardonic laugh. "Then I tell you, Sir, that you lie—yes, you lie! These premises happen to be my own property—the lady is my tenant. I have, moreover, every reason to believe that she is not at all averse to my attentions."

The other bowed low, but on straightening himself whipped his sword from its scabbard.

"I must beg leave to deny that statement," cried he. "I am ready to defend my opinion and throw back in your teeth your impeachment of my word."

Sir Jocelyn set down the lantern, and I heard the whistle of his blade as he jerked it from its sheath; in another moment they would have fallen to, then and there, just within the gate, had I not rushed in between them.

"For heaven's sake, Gentlemen," I

cried, "do not draw upon each other here within a few hundred yards of a Gentlewoman's house. If there be bloodshed Mrs. Ullathorne—"

"True," said the stranger, interrupting me. "This is not the place to settle our difference. Is that you, my friend of yesterday?" he added, turning to me. "You are an honest lad, and may surely be trusted to see fair between us when we have reached some more suitable spot."

"No, by all the gods?" broke out Sir Jocelyn, in a more good-humored tone, "let us do the business in proper form. 'Twere a pity to miss such a chance. I own I love a bit of sword play delicately carried out, and by your look, Sir, you should wield a pretty blade. 'Twere a thousand pities to spoil the affair."

Here the other was about to interpose when Sir Jocelyn checked him.

"Do not doubt but that I mean to afford you the satisfaction which your honor demands," said he. "I do but wish that the affair should be carried out with due respect for ceremony, and as much regard to the niceties of detail as is possible under the circumstances. You will send a friend to me to arrange particulars of the meeting, which, with your leave, I propose should take place at daybreak to-morrow morning. I presume there is some Gentleman in the neighborhood who will be willing to act for you."

"Devil a one, Sir!" responded the other. "I am an entire stranger in the place and have no acquaintance within reach, unless you count this young man with whom I chanced to speak a word or two last night."

Sir Jocelyn burst into a mocking laugh, at which the other, who had restored his sword to its scabbard, partially drew it again.

"My quarrel is with you, Sir," he cried fiercely, "and I have no mind to be put off with trifles. Will you agree

to stand up to me, man to man, tomorrow, or must I force you to draw now?"

Sir Jocelyn, instead of retorting angrily as I expected, threw out his hand as though to appease his adversary's wrath.

"Pray be patient, Sir," said he. "I was but startled at the irregularity of your proposal. Honest Luke Wright here is the son of one of my tenants, and knows more about the plough-handle than the sword, I imagine. Nevertheless, if you are satisfied with such an assistant, and since the duel is to be a single one, let Luke be your second by all means. He is an honest fellow and though he may cry 'Whoa' or 'Gee-back' when he should say 'Halt,' I have no doubt he knows the nature of fair play."

I flushed up at Sir Jocelyn's goodnaturedly contemptuous tone, and glanced hastily at his adversary in dread lest he should now despise me too much to accept of my act of service; but to my surprise and pleasure he looked back kindly, and stretched out his hand to me with that frank and friendly air which had before won my heart.

"Mr. Wright," said he, just as if I were his equal, "will you do me this favor? I vow had I a dozen acquaintances in these parts I should like you as well as any. 'Twill bring me luck, I think, to have so honorable and straightforward a second."

I grasped his long slender hand in mine warmly, and he smiled as he withdrew it, and once more shot a kindly glance at me as though he would have said: "We understand each other." Then, turning to Sir Jocelyn, he addressed him as haughtily as before.

"I am lying to-night at 'he village ale-house hard by, and must ask you to waive etiquette for the nonce and send your friend to arrange the matter with myself. Mr. Wright can walk to my lodging with me, so that all points can be settled without loss of time."

"Tush!" said Sir Jocelyn in a vexed tone, "'tis a thousand pities to make such a hotchpotch of the business as we are doing. We might just as well settle it straight off, like any common brawlers, for all the dignity or elegance there will be about it. But I own it is not convenient to me to fight to-night. It would, if I may say so, cast a shadow over my good folks' revels if the Master of them were run through before the opening of the ball. To-morrow then, Sir, we shall settle our difference. I will send my Cousin, Mr. Robert Bilsborough, to wait upon you without delay-by the way, Sir, you will perhaps favor me with your name?" .

Here Sir Jocelyn picked up his lantern and once more held it so that the light fell full upon the other's face.

"I regret," responded the latter, "that I am unable to oblige you in this matter. It is not convenient for me to disclose my name. But after all, what signifies such a trifle? If I ran you through, my identity will signify little to you; if I should fall at your hands, your tenant"—he nodded towards the house with a stern look—"your tenant will communicate with my friends."

Now it was remarkable that throughout this encounter Sir Jocelyn, though at first angry, had subsequently come to speak in a light and bantering manner of the projected duel, treating the matter as if it were a jest, and appearing to have lost sight of the original cause of dispute—which attitude I considered to be partly due to an odd liking for such affairs, and partly to his semi-intoxicated condition. The stranger, on the contrary, found it hard work, as I noticed, to steady his voice and to emulate Sir Jocelyn's calm, and looked at the Baronet as he spoke with such

deadly animosity that I trembled for the latter's fate on the morrow.

I knew well that it was not Sir Jocelyn's insulting words which he resented, so much as his presence on the scene and his assumption of intimacy with Dorothy Ullathorne. Moreover, the man was seething with some secret passion, quite apart from jealousy—impotent anger, belike, or disappointed love.

He was in the mood to do desperate things, and as we walked away together my heart failed me on Sir Jocelyn's account.

"You were lucky in finding room at the ale-house, Sir," I said presently, speaking partly because silence was irksome to me and partly because I was anxious to know why he had shifted his quarters.

But he did not gratify me on this point.

"I made it worth their while to find room for me," said he, and spoke no more till we came to the place.

Here he called for refreshments, being attended by the Landlady, who was alone in the house, and whom he informed in a careless tone that she might now furnish him with the reckoning as it was his purpose to set forth on his travels before dawn on the morrow.

"La, Sir!" cried she, in a disappointed tone, "we was in hopes you was going to stay wi' us a two-three days. I am sure you said you was, and we'n turned out Farmer Leatherbarrow to mak' room for ye and all. 'Twas scarce worth our while to mak' him shift for one night!"

"You shall not be the loser, my good Dame," retorted he. "I thought I should find your Marling Feast more diverting than I do, you see. But 'tis dull work watching strangers make merry."

"Eh, dear, an' so 'tis, I doubt," responded the kind soul, with a compassionate groan. "But such a bonny gentleman as yoursel' 'ull not long want for friends, for sure. Sir Jocelyn hissel'——"

"Sir Jocelyn is already my very good friend," cried he with a harsh laugh. "I am expecting a Kinsman of his to see me immediately. But for all that I find it dull here, and I must be off to-morrow. Will any of your folk be stirring so early, think you?"

"My word, your Honor, I can tell you naught as to that. I doubt they'll none of them be back fro' the dancing. I'll do my best to wakken up mysel', but I've been a-foot all day—as a poor woman must when her Gaffer goes a-pleasurin', leaving all the work to her——"

"Nay, I'd never be so hard-hearted as to disturb you, Dame. Leave the stable unlocked and a measure of corn handy, so that I may feed my horse before I set out. I'll breakfast somewhere on the road."

Presently Master Robert appeared, and, on the door of the little sanded room being closed, bowed low to my principal, and ironically to me.

It was arranged that the meeting was to take place at Oaklands, a small wood on Sir Jocelyn's property about midway between the inn and Ferneby Hall. Master Robert eyed the stranger with great curiosity and presently remarked with a titter:-

"This is, I vow, the most mysterious affair. You, Sir, it seems, are determined to remain nameless, and my Kinsman, Sir Jocelyn, not only swears me to the direct secrecy concerning it, but absolutely refuses to make me acquainted with the cause of the dispute."

"Sir Jocelyn shows his discretion," replied the other.

"I think, however," resumed Master Bilsborough with a sly look, "I think, however, he! he! that I can form a pretty shrewd guess. A certain fair lady with whom you appear to have been smitten at first sight—he! he!—and whose address you carefully noted—I suspect—"

"Pray, Sir, have the goodness to keep your suspicions to yourself!" said the stranger hotly. "I think we have now completed our arrangements, and I will no longer detain you. 'Twould be a thousand pities that you should miss any more of the festivities."

Master Robert looked for the moment a little resentful, but a certain flash in the keen blue eyes which were bent upon him seemed to recommend prudence, and he therefore bowed with a cringing air, and said he was vastly obliged to the Gentleman for his consideration.

The London Times.

(To be continued.)

JAPANESE FLOWERS IN ENGLISH GARDENS.

If English gardeners had to stock their gardens with British plants only—and such was almost the case before the middle of the fifteenth century—they might have had pleasant gardens, but the gardens could not have been brilliant in color, or varied in the number and character of their plants. It is true that we have many very beauti-

ful British plants. Among our true natives we have wood anemones, bluebells, daisies, heather, sea-thrift, traveller's joy, hawthorn, lily of the valley, daffodils, primroses, wild roses, gorse, broom, and, others; and, among strangers that have taken so kindly to our soil and climate that we almost count them as true natives, we have snow-

drops, horse-chestnut, the Nottingham crocus, and others. Yet, with all their undoubted beauties, none of them by themselves, nor all together, could be trusted to make a garden beautiful as we now understand it. For most of them the time of flowering is too short, and they would not take rank among the plants which gardeners now call "furnishing plants." All that is now changed, and from January 1 to December 31 a well-stocked garden is never absolutely bare of flowers; and that it is not so is owing to the fact that from the end of the fifteenth century there has been a constant importation of good plants, never-ending and still going on, from foreign countries; and among these foreign countries Japan has been a very large contributor to the beauty of our gardens from the early part of the eighteenth century.

I propose in a short paper to give some description of the indebtedness of our gardeners to Japan. I do not propose to give a complete list of all the plants we have received, but rather to pick out the best of them, i.e. those that have made a permanent mark in our gardens, and perhaps to describe some of them at some length, so as to bring out the particular interest attaching to them. In making the selection it will be necessary to name and describe some which are not strictly confined to Japan; they may be found in China, America, and elsewhere, but I shall describe them as Japanese, either because they have come to us direct from Japan, or because they have in many cases come to us much improved in Japanese gardens. And I wish also to say that when I speak of any plants as completely hardy or otherwise, I am simply giving my own experience, and so am obliged to use such words as "here," "in my garden," &c., meaning a garden in South Gloucestershire.

In the first opening of the year we

learn something of what we owe to Japan. In an ordinary English winter, with an average amount of frosts in December and January, there is not a single English plant in flower before the beginning or even the middle of February. If the previous November and December are very mild, it may be possible to find four British plants in flower towards the end of January. and no more. The four are the hazel, often showing the catkins, or male flowers, and sometimes, but very rarely, the pretty little scarlet female flowers; two poplars; the spurge laurel (Daphne Laureola) and Helleborus fatidus (a doubtful native). To these some would add the winter aconite (Eranthis hiemalis), a most welcome early visitor; but it is not a true native; nor is the snowdrop. It is not surprising, therefore, to find that when Bacon gave his scheme for a Ver perpetuum all the year round, he had to confess that "for December and January you must take such things as are green all winter-holly, ivy, bays, juniper, cypress-trees, yews, &c."

In this dearth of native flowers it is something to find two good shrubs in flower, for both of which we are indebted to Japan, the Chimonanthus fragrans, and the Cydonia or Pyrus japonica. The Chimonanthus was introduced into England in 1799, and is said to have come from China; but from the first it took the name of the Japan alispice, probably because it had been made known to European botanists by Kaempfer's description of it among other Japanese plants in 1712. The flowers often come in December, and I know few more acceptable presents to friends in towns than some of these flowers. They travel well, merely in an envelope, and if put into a saucer of water or damp moss, will perfume a room for many days or even weeks. The scent is very powerful, and to most persons very pleasant; but to

some it is too heavy and suggestive of hair-oil. The plant is difficult to increase, but I have raised it from seeds, which, however, are very seldom produced in the open air in England; they are like brown broad beans. Cydonia japonica was introduced into England about the same time as the Chimonanthus, and has proved a valuable addition to English spring gardens. It is abundant in Japan as a low shrub, and in England it seems to be at home everywhere; and, with its brilliant red flowers, perfect hardiness, and easy cultivation, it has been a welcome visitor in many a cottage garden, and in the most highly dressed great gardens. There are many varieties of it, from the purest white to the richest red; and about twenty years ago a new variety was introduced from Japan, by a Bristol nurseryman, of low growth and smaller flowers, but with an abundance of orange-like fruit, which at first was supposed to be a valuable addition to our fruits, especially for The promise has not jam-making. been fulfilled, but the bush is valued, as it has produced many varieties, one of which, sent to me by Herr Max Leichtlin, is prized by me as the most beautiful of spring-flowering shrubs, the flowers being of a rich clear vermilion, and being very abundant and long-lasting.

Another useful shrub for early flowering which we have received from Japan, though it grows in China also, is the winter-flowering jasmine, J. nudiflorum. It is often in flower in December and all through January, and is perfectly hardy, and so has its value; but the growth is so stiff that I have never been able to admire it very much. But long before the spring is over we have the lovely flowers of the wistaria, perhaps the most beautiful of all climbing flowering shrubs. It is found in both China and Japan, but it has been always more appreciated in

Japan than in China, and is reckoned as among their most favorite flowers. As a wild plant it is abundant in the upper mountainous forests, where it clings to and overtops the highest trees, and eventually kills them, like the lianas of South America. As a cultivated plant it is planted and utilized everywhere in Japan. It is even planted along the banks of rivers, where it forms excellent cables to assist in pulling boats up the stream; and large arbors are formed from it sufficient to hold a hundred or more people. It was introduced into England in the early part of the last century, and when once established there seems no limit to the length of space it will occupy; there are many instances of growth of three hundred yards and more, with every foot covered with flowers in the late spring -almost more flowers than leaves. I have never seen the fruit-a bean-out of doors, but I have seen it on the lovely pure white variety. It is hard to name a more beautiful hardy flower than this; in good seasons it will be a mass of white pendent bunches of flowers, each eighteen inches in length or more; and from this pendent habit I think it better suited for a pergola than for a wall. In spite of its great beauty, the white form is by no means so great a favorite with the Japanese as the purpie one.

Magnolia stellata is one of the most desirable spring-flowering shrubs that Japan has sent us. Like most of the Japanese magnolias, of which I must say more when I come to the trees, the flowers come before the leaves. I have never seen a plant much above six feet high, but a bush of that height will be as thick through, clothed to the ground, and in April covered with hundreds of pure white flowers each about the size of a good tulip, and of a pleasant delicate scent. Kerria

japonica is another good spring shrub with an interesting history. doubled-flowered form was introduced in the beginning of the last century, and at once deservedly became a great favorite. But its botanical affinities were uncertain, and so it took the name of Corchorus of the family of Tiliacea. It was not till thirty years later that the single form arrived, and it was at once seen to belong to the rose family, and had to change its name. Both forms are well worth growing, but for a rich display of color the double form still more than holds its own.

To Japan we owe the Hydrangeas, both the fine blue and white forms. and H. paniculata, which, when well grown, is a beautiful bush in summer; but it is very capricious. With these we may join two Viburnums: V. plicatum, very like our double Guelder rose, but handsomer, and V. odoratissimum, which has very fine foliage, but does not generally flower till it has reached a good age. And among the spring shrubs I must not omit the Photinia. It is closely allied to the hawthorn, and in some parts of Southern England it has been planted rather largely in woods, but it is not often seen in gardens. It may almost be called a tree, and its special fitness for gardens lies in its handsome evergreen foliage, and the early shoots. are large and of a rich red, so that at short distance the tree covered with an abundance of fine red, almost scarlet flowers. It is quite hardy. And among evergreen shrubs which make a good show in the spring the Fatsia japonica should not be overlooked. It is really a fine Ivy, with large palmate leaves, and in the southern counties may be called a tree. With me it is never more than a low bush, but I have seen it in Devonshire and at Abbotsbury as an excellent Perhaps no flowering shade tree.

shrub that Japan has sent us has been so popular as the Camellia, which was one of the earliest of Japanese introductions, and which, though more often seen in greenhouses, is yet quite hardy in the South of England, but will not grow everywhere. I think it dislikes a soil charged with lime, and it is certainly more happy when grown within the influence of the sea. About the same time the Aucuba japonica was introduced. The plants introduced were variegated and evergreen, and formed handsome bushes, but they were all male plants, and eighty years passed before Fortune sent the female plant; and since that time the Aucuba, with its rich red berries, which it carries all through the winter, has taken its place as one of our best berry-bearing shrubs. Nor must we overlook the lovely varieties of maples of which Japan has sent us so many during the last few years; they have formed a most valuable addition to our deciduous shrubs, and in the colors of their leaves in summer as well as autumn they are unsurpassed. In Japan it is found as a wood plant at high elevations, and some English gardeners think that shade suits them better than bright sunshine; this is not universally accepted, but it is quite certain that in some places they flourish and produce very brilliant colors in dense shade. Caryopteris Mastacanthus is a very useful shrub on account of its flowering late in the autumn; it forms a low shrub with pale blue flowers and gray leaves, which are used in the manufacture of mastic. And among our more recent gifts is the Coriaria japonica; the flowers are insignificant, but they are followed by masses of brilliant red berries growing all up the long stalks. In beauty, perhaps, it is surpassed by a more recent introduction from the Himalayas, C. terminalis, which carries its transparent golden berries at the end of the stalks; both

species are highly desirable, but the berries are said to be very poisonous, though the birds eat them greedily.

The list of Japanese flowering shrubs is a very long one, but I must not quite pass by the Azalea, the Diervilla -more commonly known as the Nandina, Weigelia, the Osteomeles, Abelia, Berberis, Pittosporum tobira, Elwagnus, Styrax, and Rubus phanicolasius; but want of space compels me to say but a few words on each of these. The Azalea requires no description from me; nor does the Diervilla, but it may be well to note that the shrub should always be cut back rather closely immediately after flowering; the Osteomeles is a pretty rosaceous shrub with delicate foliage and white flowers; and it is interesting from its curious geographical range; its known habitats being at present confined to Pitcairn Island and Japan; Nandina is a very delightful shrub; it is a true native of Japan, and has been called the sacred bamboo of Japan-yet it is no bamboo, but closely allied to the Berberis; the foliage at all times of the year is beautiful on account of the variety of coloring in the young shoots; but in England neither the flowers nor fruit are remarkable, for though it flowers freely, it seldom produces much fruit; but in the South of Europe the bunches of berries are in great request for Christmas decorations. The Abelias are excellent autumn-flowering shrubs, and do not require a wall; and in autumn they produce an abundance of brown and white flowers, which are very attractive and useful. Of the Berberis family we have several from Japan: the B. Thunbergi is very lovely in the coloring both in its spring and autumn foliage; and B. japonica is the handsomest of all the large-leaved berberids. Pittosporum tobira is very seldom seen, but I know of no shrub that keeps its deep green leaves so surely through the winter; and in the spring

it has bunches of sweet flowers; but probably it is not really hardy north of London, and everywhere it asks for a sheltered position. Every Elwagnus is worth growing either for its foliage, flowers, or fruit, and they are all quite hardy; the under-side of the leaf of E. reflexa is of a rich velvety brown, and is a beautiful object under the microscope, being entirely composed of stellate hairs. There are three or four species of Styrax, all very beautiful in flowers, but scarcely surpassing either in flower or scent the beautiful S. officinalis of South Europe. phænicolasius is a very handsome bramble; the whole plant, and especially the calyx of the flowers, is covered with red hairs, which end in a cup, like the sundew, and are fly-catchers; the fruit is now known as the wine berry, and is much liked by some, but to me it seems mawkish. The last among the flowering shrubs that I can now name-except the roses-is the Citrus trifoliata, a true orange, with very pretty deciduous foliage, and very formidable thorns. With me it is quite hardy, and produces in spring an abundance of small white sweet-scented flowers followed by golden oranges, of no value as fruit, but helping to make the bush a very handsome object. There is no doubt that it might be used as a hedge-plant, and I have seen a hedge of it at Baveno on the Lago Maggiore, between the English church and the town, immediately adjoining the public road; in such a position it is really dangerous to passers-by, for the strong thorns, three inches long, are worse than barbed wire. It is now being tried in America as a stock for the better oranges, and it is believed that by its help good oranges may be grown even near New York.

Japan has few roses, but we have received two from there which are pre-eminent, R. rugosa and R. polyantha. R. rugosa was for many years known

only from the description by Thunberg, but it was introduced into English gardens about fifty years ago. In Japan it grows chiefly on sandy soil near the sea-shore, and it might perhaps be useful as a binding plant on dunes; but as a garden plant it holds a very high rank, and there are now many varieties of it, all beautiful, but I think none more so than the original single white. R. polyantha is one of the best climbing roses, and the abundant bunches of small white flowers are delightful. Both these roses lend themselves readily to hybridizing, and very beautiful garden roses have been obtained from them; and in all the hybrids the marks of the parents are curiously permanent. The hybrids raised from R. rugosa always show their parentage in the wrinkled leaves; and the hybrids of R. polyantha always have the saw-like stipules that are so marked in the species.

It is time to come to the trees, though I leave unnoticed many good flowering shrubs that ought not to be passed over. Japan is rich in good conifers. many of which have proved very ornamental additions to English gardens: such as Chamæcyparis, Thujopsis dolabrata, Sciadopytis verticiellata (the umbrella pine), Cryptomeria japonica, and others; but I must pass them all by, because I wish to give a more detailed account of the Maidenhair tree, which I consider almost the best gift we have received from Japan. It was described and well figured by Kaempfer in 1712. and was sent by him to Europe with its Japanese name, Gingko. This name was altered in 1797 to Salisburia adiantifolia, which well describes the likeness of the leaf to the maidenhair fern, though the Japanese compare it to the web-foot of a duck; but, according to the present laws of botanical nomenclature, the old name, Gingko biloba, has been restored. It came to England about 1750, and has ever since

been held in high esteem as one of the best and most graceful trees that can be planted on a lawn. It rather resembles a fine pear-tree in shape, with abundance of foliage, but not too thick, and in the autumn the leaves put on a beautiful tint of old-gold, which they keep for many weeks after they have fallen. But with all these advantages it is very seldom seen; though for planting in town parks few can equal it. The male and female flowers are borne on separate trees, and though it has flowered on the old tree at Kew, the oldest, I believe, in England, I am not aware that it has ever fruited in England. In the botanic gardens at Geneva there are two fine trees, and abundance of fruit; and at Cannobio, on the Lago Maggiore, there is a pretty little avenue of them just outside the town, from which I gathered plenty of ripe fruit. In its early years it is a slow grower, but once established it grows more freely. The great interest of the tree lies in its history as a tree. It belongs to the yew family, and is almost the sole survivor of an extinct type of tree; and though it has only been known as a living tree in England for 150 years, it is a very old inhabitant, as leaves and fruit have been found in a fossil state in the inferior oolite beds of the Yorkshire coast, in the Stonesfield Slates, in the island of Mull, and elsewhere. Of a very different character, but in its way as great an ornament to our lawns, is the Paulownia imperialis. It was introduced long after the Gingko, but its grand foliage, and trusses of purple flowers like foxgloves, have made it more popular. The flowers however are not often seen, as the buds are formed in the autumn, and will only survive for flowering if the winter is very mild. By cutting it down to the ground, or even cutting back the branches, very magnificent foliage plants are formed, so that I have seen

leaves that were not fully covered by an open sheet of The Times. It is quite hardy in England, but does better further south; at the hotel gardens at Vevey I measured one with a diameter of more than five feet, and a spread of branches over sixty-five feet, and another on the pretty island in the middle of Lake Orta seemed still larger; but as it was behind a wall I could not measure it. Among other fine flowering trees we owe to Japan I must not overlook the Magnolia. M. obovata and M. conspicua are beautiful objects when in full flower in the spring; though perhaps the beauty would be increased if the fine white flowers were accompanied with leaves; but we can admire them and be thankful for them as they are.

Among fruit trees Japan has sent us two of high value, the Loquat and the Persimmon. The Loquat, Japan medlar, is well worth growing for its fine foliage only, and I have never heard of its producing fruit out of doors in England, though it will sometimes produce flowers in the southern counties. I suppose that it would not even live north of London, but in Southern Europe it forms a very handsome tree, and produces abundance of its refreshing fruit. The Persimmon (Diospyros Kaki) is a much hardier plant, and it is surprising to me that it is not more grown. I have had it for many years as a wall-tree, and am always delighted with its handsome leaves, which in autumn put on most gorgeous colors. The flowers are of little beauty, but the fruits make a splendid show on the tree, and with me they are sometimes as large and ripen as well as in the Riviera; but they require to be picked before the frosts come, and to be ripened in the greenhouse. As a dessert fruit both for beauty and flavor they are very hard to beat; and my experience is that the tree can be as easily grown, and with

as much certainty of fruit, as a peach or nectarine.

We owe a great deal to Japan for many beautiful herbaceous plants. The list is naturally headed by the chrysanthemum, which, though native also in China, and much appreciated by the Chinese, has been taken as the national flower of Japan, and has been so improved by the Japanese that in the gigantic flowers now produced it is almost impossible to trace any likeness to the small but pretty wild flower from which they have all sprung. Probably no flower has done so much to brighten our greenhouses in the winter months, and the ease with which good plants can be grown, and the long endurance of the flowers when cut, will probably long continue to keep up its popularity. The Japanese anemone has proved a great acquisition to our gardens, and it also is native both in China and Japan. The white form is one of our most beautiful autumn flowers, and where it likes the soil it almost becomes a weed; but it will not grow everywhere. The yellow Day Lily (Hemerocallis) is a very old inhabitant of our gardens, and always welcome: its extreme hardiness and abundance of flowers make it welcome to every garden, and the Japan primrose (P. japonica) is a grand member of a beautiful family, but it is very particular in its choice of a garden; I have never succeeded with it.

Of all the herbaceous plants that Japan has given us, I suppose the palm would be given to her lilies and irises. If she had sent us nothing more than *L. auratum* and *L. longiflorum*, we might well have been content.

Both of these grand lilies are in the first rank of their beautiful family, and by many would be considered the most beautiful; and as they seem equally at home indoors or in the open air, they must rank as amongst the most

useful. But they are very capricious; it is not often that they seem quite happy, and neither of them will do with me; but how well they will do when they feel themselves quite at home will be well known to those who have seen them in the gardens of the late G. F. Wilson at Wisley, where they grew as if they were the natural product of the country, with very little attention. Let us hope that they will keep up their beautiful growth under the new management of the Horticultural Society, to whom the garden now belongs. Very much the same must be said of the lovely Iris Kampferi or lavigata. With the Japanese it is one of the chief favorites; and no garden of any size is without a large extent of this iris. In some places in England it grows as well as in Japan, and is especially suited for the sides of shallow ponds; but in most gardens I fear that the experience is the same as mine, that the plants will last only a few years; but everyone should give it a trial. And as the last of the herbaceous plants that I can name I must say a little about the grasses. The Miscanthus, better known as Eulalia, is a most graceful grass. It has not the feathery plumes of the Pampas grass, and indeed is not often seen in flower; but for beauty of foliage it is far better, and the zebraleafed variety is very ornamental, and a great puzzle. But of all the grasses none can equal the bamboos, and those which we have received from Japan are nearly all hardy, and have in some respects given a completely new character to many gardens. I cannot here go into all the beauty and interest of bamboos, and there is no necessity for my doing so, for everything worth knowing about them can now be well and pleasantly learned Lord Redesdale's "Bamboo Garden," an indispensable book to the grower of bamboos, as the author has

a most intimate acquaintance both with Japan and with bamboos.

I must leave unsaid all that might be said of Japanese climbers and bring my paper to a close. I wish to say again that I hope every reader will look on it as the merest sketch of the indebtedness of English gardens to Japan. I have simply picked a few of the best of the flowers here and there, and strictly confined myself to those of which I have a personal knowledge and experience. To do the work in full would almost require a volume of the Cornhill, as those well know who have any acquaintance with the literature of Japanese botany. I am not "gravelled for lack of matter," but for lack of space. I should have liked to show how our indebtedness is increased by the short time during which we have received plants from Japan. We had been receiving plants for more than two hundred and fifty years from the great continent of America, before our gardens had one plant from the comparatively small islands of Japan; and yet it is not too much to say that Japan has left a greater mark on the ornamental character of our gardens than America. And I should also have liked to say something on the climatic conditions of Japan, which have enabled it to do so much for English gardens; and on the curious connection between the flora of Japan and North Americabut space forbids.

In one respect Japan and England come very near together. We pride ourselves on our gardens, and call ourselves as a nation lovers of gardens and flowers. Japan is a nation of gardeners, and every man, woman, and child is passionately fond of flowers; with them gardening is a religion. We may then associate ourselves with them as brother-craftsmen, and I shall not offend against the laws of strict neutrality if I end my paper by the

wish that my brother-craftsmen in Japan may soon have the blessing of an honorable and lasting peace in which they may again quietly exercise

their skill in the cultivation of beautiful flowers, to their great delight and profit and to our great advantage.

H. N. Ellacombe.

The Cornhill Magazine.

MISS SILVER'S ATTIC.

It was on the 10th of September, 1872, that the dispensary doctor from Ballyberesford pulled down the front blinds of the slated cottage, and told Miss Silver to try and bear up. Miss Silver tried, and did not find it quite as hard a business as she felt it should have been. So she ordered the deepest gilded lettering for "Charlotte M'Gaw, Born 4th Dec., 1831, Died 10th Sep., 1872," on an extremely choice red granite headstone; and she waited until the 12th of September, 1873-a clear day over the year-before she put on her crimson homespun polonaise once more. Her step-sister had never liked that polonaise. Lizzie felt a sudden wave of freedom rush over her, at the thought that no one would ever object to her taste in dress again.

Charlotte had possessed all the virtues; but she invariably objected; she had much rather you did not; she thought it was utterly absurd-on principle, and straight through. Lizzie Silver, younger, softer, of a different strain, had outwardly obeyed, and inwardly chafed, through one-and-twenty of her one-and-thirty years. Charlotte was gone, as the unlamented father and bitterly mourned mother had gone long ago; and she, Lizzie, had had a year to "get over it"; and she could wear anything she liked, and the slated cottage was hers-and the big attic.

When she arrived at this point, Miss Silver tied on her red-ribboned hat above her brown chignon, and went out

to think it all over on the rocks below the cottage.

The cottage stood-stands still-in Lisnabeg; and Lisnabeg is a tiny fishing village nestled in an elbow-crook up the Antrim headlands, just where they throw their iron basaltic arms about the curve of the stormiest bay on the Moyle. Landward, the village is invisible until one comes out on the cliff track right above its seven small houses; seaward, it glints upon the darkness of the rocks like a clutch of gannet's eggs in an inaccessible crevice. Salt-smelling heaps of weed spread a satiny glitter about the very doorsteps of the cottages; the spray of bursting rollers, whirled across the harbor bar, dims the window-glasses with sparkling dust of the sea.

All day and all night long the roll of the great Atlantic throbs like a giant pulse in the strong, clear air. There is no other sound in Lisnabeg, except the chatter of the fisherpeople's children, launching driftwood ships down the shingle beach, or the low thunder of a boat drawn up on the stones. A Sleepy Hollow in a sleepless century, this gray gull's nest; and as it dozed in its warm corner thirty years ago, so it rests to-day.

The morning was one of those golden mornings that only September brings. One breathed gold in the air, one touched it on the gilded rocks, one saw and heard it, casting itself in tinselled foam upon yellow-bronzed heaps of weed. The old longing for light and

color was upon Lizzie Silver to-day. Color, color, color! She loved it as a Fuegian loves the fire that is his god; as the white-breasted gull loves the blue air in which he dips and swims. Yet there was little color within or without the life of this Northern woman—orphan of a gray, over-worked Ulster curate of Scottish race; inhabitant of a lonely, windy land where other homes are barely less poverty-stricken than her own; other lives barely less flat and barren.

There were no great houses about Lisnabeg. Visitors never came to stay in the summer; the coast was too rugged and dangerous, and provided no sandy beach for children. schoolmaster and his wife, "up beyond"; the dispensary doctor; the rector; one or two farmers hovering on the debatable line between small gentry and big tenantry-these made up all the available society for many miles around, in the class to which the step-sisters instinctively clung, with the pathetic pride of their nationality. Lisnabeg itself was but a handful of fishermen's thatched cottages; and the one slated cottage, now owned and inhabited by Lizzie Silver alone, was better than the rest only in outward appearance. Within, it had a kitchen, a back bedroom used as a parlor, a small upper bedroom, and a big, light, airy attic, running across the whole front of the tiny house, and facing to the west-nothing more.

In the attic Charlotte M'Gaw had always slept, after the death of her step-father and mother. Her few possessions were in it still, and Lizzie felt unspeakably dishonorable at the thought of going over them and turning them out, as she meant to do this afternoon. Yet—the year was up, she was out of mourning, she had kept her resolution of leaving the attic locked for twelve months. No one could say now that she had been hasty or

thoughtless in taking possession of what she had longed to have, this twenty years and more. And she had longed for it!

The solitude, the bareness, the great bright outlook over empty sky and sea, fascinated her unspeakably. When Charlotte had gone on a long walk to "the town," to buy wool and beads, or tea, or bacon, Lizzie used to creep up like a guilty thing to the attic, sit down in the long, low sunny window, and lose herself in happy loneliness. looking across the sea. What she saw there she could not have told, if asked; perhaps she did not even know. Once, however, Charlotte came back unexpectedly on silent rubber-goloshed feet (a heavy rain having begun) and caught her sitting there.

"I don't at all approve of these mooning ways of yours, Lizzie," she had said coldly. "You have no idea how ridiculous you look, gaping on that seat like the heroine of a penny novelette. And I don't care to have my room made into a parlor. Go and get something to do, for pity's sake. Laziness is a perfect disease with you."

Lizzie Silver never went up to the attic again, unless Charlotte called her; and she cried herself to sleep that night. It was quite true that she read penny stories, when she could manage to buy them secretly. taught her that things happened somewhere, sometimes; that there were houses where people wore satin evening dresses, with low neeks and trains, and called each other "Lord Arthur," and "Lady Madeline," sitting in scented conservatories, under crystal lamps; that wonderful adventures occurred to white-robed maidens wearing a single rosebud amid their golden curls, in ruinous Italian castles perched above purple lakes-all combined, in a word, to tell her that there would be something more, some day.

There never was.

It was not until a year before Charlotte's illness and death-the year of her own thirtieth birthday-that Lizzie began to understand this. Nothing ever happened after anyone was thirty, she knew. The rest of life was a mere postscript to twenty-nine. And Charlotte always had told her that novels gave false ideas of life. seemed she had been right; Charlotte was always right-that was what made her so hard to live with. No doubt she was right also when she gave her younger step-sister a "piece of her mind" for saying that she felt herself "not the same" as other girls. She was a good deal lazier, and a good deal less truthful, said Charlotte M'Gaw; and quoted Longfellow's "Psalm of Life," to Lizzie's complete disorganization and defeat.

So nothing happened, and nothing went on happening. Lizzie blushed as she acknowledged to herself, once on a summer's evening, that it generally required a man to make things happen; they seemed to be an indispensable part of all happenings--and there were no men near Lisnabeg. There never had been. The sons of the doctor, of the rector, the schoolmaster, and the debatable gentleman-farmer, went away to Dublin, or Belfast, or Australia, as soon as their knickerbockers were exchanged for peg-top trousers, and only the daughters stayed.

Sometimes there was a sewing-meeting, or a very small school treat; once or twice the excitement of a missionary address. The women called on each other, and went out to tea with each other, and talked about each other, and each other's maids. Their dresses turned Lizzie Silver nearly sick; the horrible puces and magentas, the glaring purples, hurt her like a discordant scream. She used to make herself skirts and polonaises of common peasant stuffs—in those days unknown to the educated classes—and took comfort

in madder-crimson flannels, or homespuns of heather-brown, despite Charlotte's step-sisterly admonitions against "making herself look affected and absurd."

The bead-work and Berlin wool-work. by which their tiny income was pleasantly enlarged, was a source of absolute torture to Lizzie. The patterns were so ugly to her mind, so beautiful to everyone else's, that she used to weep in secret over her own bad taste. She knew the fat red and purple roses, the brown and white spaniels on aniline-pink backgrounds, must be lovely, because everyone said so, but she stitched at them with a heavy heart and half-averted mind. Nevertheless, her manual dexterity became great, and Charlotte praised-for once. Lizzie was emboldened to make a pattern of her own, and work it secretlya strange mosaic of the clearest and deepest colors in the workbox, mingled in odd geometric shapes. But when she brought it out in fear and trembling, Charlotte, and Miss M'Coy, who had "dropped in to partake" of a six o'clock tea, chorussed their united horror at the wicked waste of good materials over unsalable rubbish; so she unpicked all the beads, and cried once more. After all, the beads were mostly ugly. So was nearly everything in people's houses, poor Lizzie made up her mind-there were only the sky and the sea and the sunsets, and the green grass on the cliff, and the flush of sea-pinks in the spring-time, to look at with pleasure.

Undoubtedly, she was "odd," or at least her eyes saw oddly. Lizzle placed her bedroom glass full in her window one day, and looked at her eyes. They were not very odd to look at—gray, like a kid's, in color; prominent, clear, and sandy-eyelashed. Her hair, she knew only too well, was sandy and scanty. Her skin was neither bright nor pale. Her mouth was large, but it was very red, and Lizzle thought

this not unpleasing, at all events. Yet, when one was thirty, what did anything matter? Perhaps, after all, books were wrong about that. If they gave false ideas of life in other things, mightn't they be wrong about ages too?

She had not time to think it out before Charlotte died.

In the interval between the death and its anniversary, something very small had happened. It was not a happening in the real sense, only after a relative fashion. Lizzie heard by chance that the captain of the Liverpool to Derry tourist steamer had bought a case of beads from Murano, very cheap, out of a shipwrecked vessel's cargo. She took the next train to Derry, saw the captain's wife (the captain being away) and bought the case outright for three pounds fifteen shillings-half the savings out of her secret tea-canister in the bedroom chimney. The captain's wife was well pleased to get the money, having bitterly grudged the whole golden sovereign spent by her husband on a hundredweight of stuff that was not even fashionable.

Miss Silver had the case carted from the terminus at Portrush, down to Lisnabeg—a weary and expensive journey of many miles, during which she sat upon the case under her umbrella in the pouring rain, perfectly happy, and blind to public opinion. She saw her treasure safely carried up to the attic door and left it there. It was only three weeks until Charlotte's anniversary and she determinedly waited until then, saving up the treat of opening the case, from which she had only seen a sample or two as earnest of its rich contents.

Now she was out on the rocks, sitting with her chin in her hands and her elbows on her knees, looking at the green and blue and golden sea, and planning.

She planned a long time, lifting a

forefinger now and then to mark off irregular spaces of empty air before her. in a manner that made a passing fisherman's wife stop on her soundless bare feet, and gaze compassionately at the unconscious figure on the rock. At last, when the sun was just beginning to slope downward towards a lake of powdery gold in the west she got up with stiffened limbs, and went into the cottage. She took a piece of cold beefsteak and a slice of bread from the cupboard, and ate them standing. Her hasty dinner over, she almost flung her plate away, seized a hammer and chisel, and flew upstairs. She unlocked the attic door, dragged in the heavy chest, and set to work.

When the boards were off, and the wrappings undone, she snatched out hank after hank of beads, and strewed them on the ground all round her; picking them up again, shaking them in the sun, crying out over them, caressing them, as one possessed. They were like nothing she had seen in all her life. These gem-like greens, these peacock's neck blues, these sunset pinks and ambers and opals, these exquisite nameless shades with the glow of frost-weather fires, and the iridescence of meadowflies' wings, shining in their crystal and pearly hearts-oh, that she could have lived all these years in a world where such lovely things were made, and never known they existed! From Murano-that was near Venice, the captain's wife had said. So far away! and for just a moment the walls fell down about Lizzie Silver, and the gray encircling cliffs melted into mist, and all the mighty world beyond unrolled in one heart-shaking vision, great and beautiful and wonderful exceedingly.

Sitting there in her bare silent room, among the heaps of glistening beads, Lizzie Silver suddenly fell to weeping, since she had seen more than the heart could bear. Her tears were always too near the surface, as Charlotte had often warned her in days gone by. She knew it, but she could not check herself now, though she was glad, as well as sorry. She was a woman in a gray life all alone—a woman not like others, as she felt and knew, without understanding why—yet there was a streak of gold among the gray at last, and the unlikeness was less of a pain than it had ever been, to-day.

Miss Silver had no servant! but gossip creeps down chimneys, and speeds in and out of ratholes. It became a source of considerable interest first to Lisnabeg, and then to the entire neighborhood-that the late Miss M'Gaw's attic was never seen by mortal eye. Everyone had supposed that Lizzie would make it into a "parlor," and receive her little round of monotonous visitors there, instead of conducting them ungenteelly through the kitchen to the ground-floor room, as heretofore. But Lizzie did nothing of the kind; nor did she even sleep in the attic, as the neighborhood managed to find out by relentless questioning.

Miss M'Coy, chief reporter in ordinary to the parish, was able after a time to state on the best authority that Miss Silver spent half her time locked up in the attic, doing no one knew what, and the other half mooning about the rocks. It became a popular theory that she was going out of her mind, and in consequence she was asked to tea with surprising hospitality and frequency. Her hostesses were, perhaps, disappointed to find that she never cast her plate of buttermilk pancakes on the floor with a yell, or impulsively trampled upon her toast. At any rate, their invitations died away after a while. Miss Silver had seemed loth to accept them, and more unwilling still to return them; she dropped back into solitude with obvious relief.

In stagnant, silent corners of the world such as Lisnabeg, life seems slow in passing; yet even while one waits for it to begin, it is gone ungrasped. Ten or eleven years slipped by the slated cottage, scarcely noted. Miss M'Coy (who wore her hair cut short now after the fashion of the day, instead of piling it in a chignon, but was otherwise unaltered) came to call at times, and reported that Miss Silver looked in wonderful spirits, but had a good deal of gray in her hair. Asked "plump and plain" what she did all day in the attic, she said she "worked," and would make no other reply.

The short red crop of Miss M'Coy turned gray too, as time still slipped on; her sturdy figure grew fat and unwieldy, and she walked no more down the rough road that led to Lisnabeg. There came a year, by-and-by, when she was carried up a rougher road still—a road leading to a high green slope behind the churchyard tower—and did not return ever again.

Miss Silver grew a little older, a little grayer only. It almost seemed as if she had some secret charm to lighten the burden of her years. And still the seasons passed; and still, as in the days of her long-ago girlhood and young-womanhood nothing happened.

One day-it was during the wet and wind of August of 1903-something did happen at last. But Miss Silver knew nothing about it. She lay on the magenta rep sofa in the parlor, fully dressed, with her thin gray hair somewhat disordered, and a sinister blue shade about her mouth; while all Lisnabeg, and by-and-by half the townland above, crowded in and out of her little kitchen and sitting-room, and stood staring at her as she lay. She stared only at the ceiling herself, and not very long at that, for a kindly fisherwife stepped forward by-and-by and placed two pennies on her eyelids.

They found she had left a will on a half sheet of notepaper, bequeathing

everything to the rector for the use of the poor in Lisnabeg. When "all was over," the rector-a young, bright Trinity graduate, very recently appointed-came down to the cottage to take possession. His sister-in-law, who was staying at the Rectory for a summer holiday, walked with him, the rectoress being engaged in her overflowing nursery. The rector was very proud of his sister-in-law. She was Dorothy Gordon, "no less"-Dorothy Gordon, the brilliant young painter whose work had turned the artistic world of London upside down of late; who would not exhibit in the Royal Academy, and who had been quite rude to the editor of the "Ex Cathedra Review." Dorothy, in spite of her greatness, condescended to be well pleased with Lisnabeg. It was delightfully quaint, she said, and she had more than half a mind to paint it. She said this standing on the doorstep of the slated cottage, while the rector fumbled with the keys.

"We are going to see the Bluebeard chamber, aren't we, Edward?" she asked. "You can't think how curious I am to find out what the poor old dear kept in it all these years. She seems to have been such a character!"

"Oh, yes," replied the rector, rather inattentively, swinging the door open and beginning to ascend the stairs. "Yes—it had better be opened, I suppose; it's only padlocked, and I'll try all my keys. Poor Miss Silver never mentioned the room in her will, that was dated thirty years ago, however. Don't excite yourself, Dolly"—as she hurried past him on the stairs, and held out her hand for the keys. "There'll be nothing here but a few old papers and portraits, you may be sure. I fancy she was a little odd."

The padlock was easily fitted with a key; the wards worked smoothly. In another minute Dorothy, gathering up her dainty pink muslin skirts in both hands, rushed into the room. The rector, delaying on the landing to secure his bunch of keys, heard her sudden cry of delight, and followed her with quickened pulse. So there was something, after all!

He found his sister-in-law standing before the big gable wall of the attic, staring at some object—a sort of bright curtain or picture apparently—that covered it. The rector stopped and stared also, in astonished silence.

On the wall was a breaking wave. full eight feet high, backed by flaming western clouds-an unspeakably glorious riot of translucent blues and greens and opals, shot through with sunset fire and gold. The bursting foam seemed ready to leap across the room; green lights glowed behind the thunderous mass of storm-driven water; spindrift smoked along its flying crest. In competition, in drawing, and in technique, it violated half-adozen canons of art. Yet the life and spirit of the work, the wind in the sky, the wild freedom of the whole design, and above all, the superb splendor of its coloring, were nothing short of marvellous. There in lonely Lisnabeg. empty of learning, art, or ambition, stripped bare of every rag of beauty by a chill Puritanism wedded to an unkindly climate, such a sight was a very miracle. Art in the hands of a true artist is always a miracle, though repeated every day. Dorothy Gordon the artist knew this; yet she was intensely excited over her discovery, and utterly amazed. What was the material of this wonderful work? sprang forward to examine it more closely.

"I must see what it is," she said eagerly. "It seems to be some kind of mosaic— Why, Edward, it is beads!" "Beads? Impossible!"

"But it is. The tinest beads you ever saw—not nearly as large as pins' heads. And such beautiful beads, too—they are like little jewels. Edward, where do you suppose this came from? It's a masterpiece. Is it some kind of Gobelin tapestry one hadn't heard of, or what?"

"My dear—I think Miss Silver must have made it. It isn't finished, if you look. And see—she has left the beads all about the room, sorted into these cups. And that big kitchen table was evidently where she laid it when she was working. It is very wonderful!"

"Wonderful! I should think so. My good Edward, you don't seem to know that you, or your predecessors have had a genius, a real one, in this cottage all these years. But she must have been a hundred! What patience!"

"She was over sixty. I believe it is thirty years since she began to seclude herself here," said the rector, looking at the picture with a good deal of curiosity. He was not at all artistic, but the immensity of the labor appealed to him.

"Thirty years," said Dorothy. She was eight-and-twenty herself. She had lived every hour of her life; she had Temple Bar.

seen strange countries and alien races; she had drunk of the intoxicating draught of London life at its brightest and best, spiced with the strong wine of success, and poured into the golden goblet c° happy youth. She had had life, and beauty, and love, and fame. And here, on this whitewashed attic wall before her, were stretched those eight-and-twenty years, and more, cut from another woman's existence. This had been Miss Silver's life.

Dorothy Gordon was a modern woman, and never cried; but her eyes were very dim as she turned away from the glowing gable wall and said with an undisguised quiver in her voice—

"If anyone had known! But how could anyone know, here? Edward, do you think the poor soul was happy?"

And Edward, remembering the almost youthful peace and purity of the old face over which he had seen the coffin closed so lately, answered—

"God's ways are not as our ways, dear; I think she was."

Beatrice Grimshaw.

TO EXPLORE ARABIA BY BALLOON.

The object of the present paper is to indicate the reasonable practicability of investigating, at inconsiderable risk to human life, a land which, hitherto bidding defiance to the boldest explorers, has through all time remained untraversed by civilized man, yet one to which perhaps before all other lands of the wondrous East there attaches more absorbing interest, more of marvel and mystery, and which moreover may, for all that has been inferred to the contrary, be found to yield the richest prizes of discovery. The country to which we refer is Central Arabia, and the mode

of approach that we advocate is one which, while it appeals to a siprit of highest enterprise, involves no mere wild or untried scheme. The true roadway across the barrier presented not only by the physical difficulties of a waterless wilderness but also by the hostility of native fanaticism is, we are convinced, not by the desert but by sky. And here it cannot be said that such previous trials and experience as we have to judge from offer any really adverse argument. Let us carefully examine the case as we find it.

The lamentable termination of An-

drée's dash to the Pole may have, indeed, for a while diverted the public mind from the contemplation of that perfectly legitimate and logical application of modern science and skillthe exploration of inaccessible tracts of the globe by balloon. It might, indeed, seem as though for the present world is standing watching the modern airship, and the yet more recently conceived though somewhat visionary flying-machine, in the hope that these will prove capable of achieving what the balloon has as yet failed to accomplish. Yet the results of past months go to prove that we cannot hope, at least until great advances have been made, that any form of aerial motor will be able, holding a definite course of its own, to contend with the streams and storms which prevail but a little way above the earth's surface,

On the other hand, it should on no account be forgotten that the balloon in Andrée's hands, and in his peculiar circumstances, cannot be said to have had a reasonably fair trial. Owing to the exigencies of the case, the balloon, which seems after all to have hardly been the best for the exceptional purpose in hand, had to be kept inflated for nearly three weeks, while the intrepid navigators were waiting for their wind, during all which time leakage was going on at a known and very appreciable rate; and thus it came about that in the end Andrée was constrained to commit himself to a wind that was not wholly favorable. To have been entirely in the right direction it should have been due south, whereas on the eve of starting it veered somewhat west of south, and, "whistling fatal allurement, through the woodwork of the shed and flapping the canvas," urged the voyagers prematurely to their ill-fated And other conditions must venture. have told, and perhaps more seriously,

against the success of that hazardous expedition. The extremely low temperature near the Pole would not only cause shrinkage of the gas, but also a constant deposition of the weight of condensed moisture, if not of snow, on the surface of the balloon.

But over and above all, the mode adopted for the controlling of the balloon would be very largely against the possibility of a prolonged voyage. This mode, it will be remembered, was by means of a trail rope dragging on the ice, which, so long as it was in contact with earth, would render a rudder sail operative to a small extent. Its very efficiency, however, depended on its actually slowing down the speed of the balloon, while it is well known to all aeronauts of experience that it is an exceedingly difficult manœuvre to keep a trail rope dragging on the ground if it is desired to prevent collision with the earth, on the one hand, or, on the other hand, to avoid loss of gas, inasmuch as a slight increase of temperature, or drying off of condensed moisture, mayindeed, is sure after a while to-lift the rope off the ground, in which case the balloon, rising into upper levels, is liable to be borne away on currents which may be from almost any direction, and of which the observer below Thus it may have no cognizance. will have to be acknowledged that Andrée set himself a task of great difficulty, in which the chances were largely against him: yet, in spite of all we learn from a message recovered from a carrier pigeon that at the end of forty-eight hours the voyagers were full of hope, with their aerial vessel still going strong, and maintaining with good promise what must certainly have proved to be the longest sky journey in time of any yet made on our planet.

But let us now turn to the possibilities of balloon travel under practicable and altogether more favorable circumstances, where climate, instead of being opposed, would be strongly in the balloon's favor, and where the utmost advantage could be taken of the winds, not as they travel more sluggishly near the earth's surface, but as they blow in strength in the free heavens aloft.

America may fairly claim to have been the first to furnish an aerial explorer of the first rank as bold and enterprising as he was confident, who offered, as far back as fifty years ago, to vindicate the capability of the balloon to accomplish exploration of the globe. His project was to make the transit of the Atlantic by a purely scientific method of aerial navigation which he himself conceived, and the soundness of which is upheld by the leading meteorologists of to-day. It was in 1843 that John Wise wrote to the Lancaster Intelligencer:

Having from a long experience in aeronautics been convinced that a constant and regular current of air is blowing at all times from west to east, with a velocity of from twenty to forty and even sixty miles an hour, according to its height from the earth, and having discovered a composition which renders silk or muslin impervious to hydrogen gas, so that a balloon may be kept affoat for many weeks, I feel confident that with these advantages a trip across the Atlantic will not be attended with as much real danger as by the common mode of transition.

Wise further specified that the requisite balloon should be of a hundred feet diameter, and twenty thousand pounds lifting power, and were such a craft provided him he announced his readiness to attempt the proposed venture.

Had this enterprising offer been taken up and successfully carried through, it cannot be doubted that there would be fewer untravelled and

unexploited regions of the globe than there are to-day. The mere crossing of the Atlantic on the back of the west wind would have added nought to our geographical knowledge, but it would have proved the possbility of utilizing the same westerly wind drift-which we have shortly to consider-to reconnoitre untrodden tracts, more particularly on the great desert belt of the earth, in comparative safety, at a relatively trifling cost, with great expedition withal, and yet with full leisure to make notes by the way, as also to sketch or photograph, not a mere track only as seen by a weary traveller from the height of a camel's back, but a broad tract with a practicable horizon of near one hundred miles on either side.

Now, among eminent meterologists there is a general agreement of opinion as to such a prevalence of westerly winds aloft as would well serve the purpose of the aeronaut Arabian explorer. Ferrel, having shown in his practical treatise that strong wind currents from the west are in general required by theoretical considerations, goes on to say that

any one of ordinary observing habits could scarcely live a week upon the earth without discovering from the motions of the clouds, and especially the very high circus clouds, that the general tendency of the air above is towards the east.

Again, Espy says:

I have found the true cirrus cloud to average scarcely once a year from any eastern direction, and when they do come from that direction it is only when there is a storm of uncommon violence in the east. Mr. Ley also, in his numerous observations of the cirrus clouds, almost universally found them to have a motion towards the east from which they rarely deviated.

Observations of the directions of

clouds at Zi-ka-wei, 31° 12′ N. lat., 121° 26′ E. long., and again at Colonia Tover, Venezuela, lat. 10° 26′, indicate that the principal component of motion above is an eastern one.

But there are other indications of the drift of upper currents besides that afforded by visible clouds. Thus Ferrel adduces as facts of striking significance:

On the 1st of May, 1812, the island of Barbadoes was suddenly obscured by a shower of ashes from the eruptive volcano of St. Vincent, West Indies, more than a hundred miles to the westward. Also on the 20th of January, 1835, the volcano of Coseguina, Central America, lying in the belt of the northeasterly trade winds, sent forth great quantities of lava and ashes, and the latter were borne in a direction just contrary to that of the surface winds, and lodged in the island of Jamaica, 800 miles to the E.N.E.

With regard to the volcanic eruption of the island of Sumbawa, about two hundred miles east of Java, Lyell says: "On the side of Java the ashes were carried to the distance of three hundred miles, and two hundred and seventeen miles towards Celebes." Some of the finest particles, says Mr. Crawford, were transported to the islands of Amboyna and Banda, which last is about eight hundred miles from the site of the volcano, although the south-east monsoon was then at its height. According to Mr. Forbes, the dust cloud from the eruption of Krakatoa was carried on the high winds to no less than twelve hundred miles eastward.

No less convincing is the evidence of the winds as actually encountered on lofty mountains. Leopold von Buch says, with regard to the Peak of Teneriffe: "It is hard to find any account of an ascent of the peak in which the strong west wind which has been met with on the summit has not been men-

tioned." Again, on Pike's Peak, the observations of the Signal Service, during ten years, show the wind to blow very constantly towards a direction somewhat north of east. So, from the top of Mount Washington, Loomis found the resultant direction of the wind to be west by north. So, again, at Mount Alibut, two hundred miles west of Irkutsk, and over seven thousand feet high, a very constant and strong W.N.W. wind is observed.

And it should be noted that it is when we approach nearer to equatorial latitudes that we find greater regularity in the winds, even such as blow It is a well-known at lower levels. fact that over parts of the Australian wilds there are prevalent upper winds from the north-west. Enduring westerly winds blow across Peru and Brazil; while undoubtedly Thibet powerful and long-lasting gales, possibly connected with the monsoons, are the heritage of the country. Equally is this the case with respect to the seaboard of Asia, of which we have particularly to speak, due to a cause which at least is unvarying-namely, the great rarefaction of the atmosphere over the centre of that continent. It is possible to prophesy almost to the inside of a week as to the coming of the southwest monsoon. And in all cases when we pass beyond these surface winds into the upper currents we find these currents are fast, an estimate of their speed being deducible from the general law that the velocity of currents increases from the lowest to the highest clouds at the rate of about three miles an hour for each thousand feet of height.

Probably there is no unexplored tract of the earth better adapted for an initial trial, or more likely to yield interesting results to an aerial traveller, than the heart of the great Arabian Peninsula. The prospects of

discovering productive regions hitherto unknown by such a survey will be discussed in due place, while the comparative certainty with which the proposed transit of the country could be effected can need little insisting on. The writer has learnt from veteran officers of the P. and O. service that from west to east across Arabia, as far as indications go, there is every probability of finding a favoring wind, and one persistently blowing overhead, if the right time of year be chosen. Moreover, Mr. D. G. Hogarth, whom, as a recent and reliable authority, I shall have to quote farther, states, from copious information, that the tract from the desert of Sinai to the centre of the Arabian peninsula "is swept by an eternally westerly wind, which keeps the Libyan sands ever moving towards the Nefud."

This is encouraging information, and if we may assume that a choice of starting ground anywhere along the length of the Red Sea, and as far as Aden, is at the option of the aeronaut, then the journey, with only a moderately fast wind, does not appear very formidable.

A few principal routes work out somewhat thus. Starting from Aden, the Persian Gulf could be reached by balloon in nine hundred miles. From a point a little below Mecca the breadth of the country could be crossed with a W.S.W. wind in seven hundred miles, as equally from a point above Mecca, while from the first of these places, with a due west wind, the coast could be reached in about a thousand miles, and from the latter in eight hundred miles. With a north or south wind an important section of the peninsula could be traversed in five hundred miles, while from Mascat a yet shorter but serviceable voyage might be carried out,

It will be seen that the Persian Gulf offers peculiar facilities for the rescue of the balloon at the termination of its voyage; and the nature and conditions of the task before the balloonist are the reverse of discouraging, as an impartial consideration will show; his special mode of travel, as compared with others, having distinct and all-important advantages.

When a vessel is frozen in, her limit is already reached; when the last camel is down, the traveller must take his final and hopeless survey; but the resources belonging to the balloonist are more elastic and more reliable. If the wind before which be drifts is inadequate or contrary, it is within his power to seek other altitudes, with the strong probability of meeting with other currents; while the prolongation of his travel is simply a question of initial cost and cubic capacity. When Count de la Vaulx landed in Poland he had still a large quantity of ballast remaining and it was a debated point with him whether he should not add to his splendid achievement that of the further crossing of a desolate Russian steppe.

Coming now to the consideration of practical results which might be hoped for, and at the same time of the utter hopelessness of obtaining such results by any other means under political and physical difficulties at present existing, I may quote some recent and very valuable notes which have been generously supplied me by an accomplished engineer and traveller whose knowledge and experience can be second to none.

Colonel A. T. Fraser, C.E., in a paper read before the Society of Arts in 1895, advocated the construction of a railway across Arabia at the 30th Parallel, and a few years later went to Akabah to determine where such a railway should cross the valley previous to entering Arabia, which he considered the chief engineering difficulty. It may be seen from any good

map that this proposed line practically marks the easiest possible route across the country, as also that where climatic conditions, as judged by the evidences of habitability, would be least severe.

Colonel Fraser, then, learning that Egyptian authorities could not get him Turkish permission, proceeded Jerusalem, whence he was allowed to go to Maan and the 30th Parallel, the Turks. however, declaring could not let him go more than one march south of that, or into the Akabah Pass, on any consideration. ended in their granting him the run of Mount Hor for the sake of making observations, and Colonel Fraser, taking a small camp, remained two nights; but the Bedouins saw his lights, and there were signs that it would have been unsafe to stay longer.

Any consideration of the projected Bagdad Railway would, it is unnecessary to say, be outside the present discussion. In the opinion of the secretary of the Ottoman Railway Company the enterprise would not pay for carriage grease; and, whether this be so or no, it suffices to say that Bagdad approaches the 34th Parallel, while the district which would be opened up is already sufficiently well known and not calculated to repay development.

As to the feasibility of effecting a balloon inflation at a more southerly latitude, which should preferably be on the shore of the Red Sea, and which should lead to a sky passage across a tract of the peninsula of perhaps the greatest economic value, Colonel Fraser insists that an ascent from the east of the Red Sea would not be easy, as it is the sacred province of the Medjar, confirming this opinion by the fact that he himself could not so much as unroll a map of his route in a Euphrates valley if there were any Turks about.

To meet this difficulty, it may be

pointed out that it would not add more than a few miles to the voyage if the infiation were effected on the west bank of the Red Sea; and possibly it might even be carried out with no great difficulty, and with perfect immunity from trouble, from one of the many islands in the lower latitudes of that sea.

Lastly, there is conceivably the expedient now being developed of a self-contained hot-air balloon, for the success of which the air lying over Southern Arabia would be specially favorable.

It remains to give due attention to such meagre information regarding Central Arabia as we at present possess, and to consider the knowledge we might hope to gain by balloon exploration, and here we would first examine a map prepared from facts supplied by Mr. Hogarth and others; and, by way of sample of the country, let us note that a central patch, marking what we may regard as the heart of the northern half of the country, and standing, roughly speaking, between the parallels of 27° and 29°, is claimed to be partially known. Let us, however. further estimate what really means. I take it that no more experienced or adventurous explorer ever penetrated into the Arabian interior than Mr. Wilfred S. Blunt, whose route and survey, drawn by his own hand, has been published by the Royal Geographical Society. To use his own words, he finds this portion of Central Arabia occupying its old condition of an almost fabulous land, whose real nature is still a matter of doubt, if not of curiosity. For more than two hundred miles from Kaf to Jof there is no inhabited place, while it is only along the course of the Wady that there are wells which attract the Bedouins. Jof itself has some five hundred houses and palm gardens, and in its whole oasis there may be

seven thousand souls. Thence, with a splendid equipment of camels, it cost the experienced traveller eleven days to cross the Nefud-a true and typical desert, and yet so far from unproductive that its mere red sand after rain becomes actually covered-so Mr. Blunt believes-with grass and flowers. More than this, it is, we learn. in one way blest above all other places-"fleas do not exist there." Of that land Sir H. Rawlinson has said that it is the most romantic in the world, with a sort of weird mystery about it from the very difficulty of penetrating it. Mr. Hogarth adds his own testimony as to this approach to Arabia, asserting that it is only entered with great difficulty and pain by man and beast, so that present-day pilgrims have almost abandoned the land route for the sea; and the central plateau is become more an island than ever. If, now, we pass to examine the rich and, from its neighborhood to the seaboard, the more accessible oasis of Hasa, the land of running streams and many springs, we find it is but a mere narrow strip, while immediately without to south and west "stretches the unknown." Further yet, when we turn to the nearer and more luxuriant spots of the south-west corner of the peninsula, the portal, as it were, of the region we seek to reach, the alluring plains which ere now have led explorers to hope to gain a footing, whence they might extend our knowledge-the "Happy Arabia" of ancient geographers-where once the waters were held back by huge artificial find dams, we ourselves equally balked, for we learn that the newest of these works is no later than the sixth century. All are broken now, and the waters filter away, allowing the sand to creep once more about the villages.

Enough. We can but avail ourselves of such legendary information as is to

hand to at least form some allowable conjecture of what the great unknown has to reveal, and how well worth at least a cursory survey. It appears that from whatever side this region is approached, tribesmen dwelling on the outskirts have, in place of any definite information, mere tales of awe and wonder bred of a certain superstitious terror. It is a wilderness upon which Nature vents her flercer moods; it is a land of wrath where the earth is shaken and the soil in perpetual unrest. There is a vague talk of saline oases and of wild palm groves; but it is said that ere men can reach these the earth opens to engulf them, or they are swallowed up in subtly shifting quicksands. The mysteriousness of these reports endows the country with a species of enchantment, and we can no longer regard the so-called desert as a mere waste-the more so when we unmistakably trace up to the limit of where any European has yet trodden how beneficently Nature has dealt with the land, converting the desert soll into very gardens of Paradise, and whole regions into luxuriant fertility. Every thoughtful traveller through the Red Sea must look out over those blue mountains to the eastward, and feel that beyond those far and fascinating slopes must lie the hope of new discovery and fresh scope for enterprise.

Now, if the generally accepted estimate of the upper wind currents is fairly correct, then, for a preliminary aerial survey, a balloon no larger than that recently employed by Count de la Vaulx might suffice, especially if the mode of inflation by hydrogen, artificially produced on the field, were adopted, and for the rest little more would be needed than a proper outlook maintained on the eastern shore of the peninsula. This, of course, is essential, as at the end of the voyage the aeronaut will need certain efficient

assistance. If he elect to alight on the coast, he will not succeed in doing so without assuredly having been sighted by the fanatical native, who, to say the least, is liable to give trouble. If, on the other hand, he prefer to drop on the water, as many a balloonist has with safety done ere now, then there must be those afloat and sufficiently near at hand who, having been watching the balloon in the sky, will have opportunity to direct their course and "stand by."

An initial experiment, altogether inexpensive, comparatively speaking, and readily carried out, should be made by fleets of pilot balloons designed to remain aloft in such a climate as the Arabian desert for the time considered sufficient to cross the breadth of the country, dismissed from chosen positions on the west side, and looked out for on all the available places on the eastern seaboard. It would not be necessary that these should be captured. If batches were dismissed from different points on different pre-arranged dates, and if after crossing the land any were sighted in the sky, the route that they had taken, as also the time of transit, would be well determined.

But so far we have not said all that is to be advanced as to the chances on the side of the aeronaut. Should it appear from preliminary tests that the passage across the peninsula would occupy a longer-even a far longerperiod than we have assumed, the resources of the aeronaut may yet by special means be rendered fully equal to meet any enforced detention in the sky. Ordinarily aerial voyages, though they seldom fail through any inanition of the balloon itself, are nevertheless commonly undertaken without any special economizing of the gas which, for safety against bursting as also for the sake of a certain indolent convenience, is allowed to escape by natural diffu-

sion from the neck of the balloon, kept constantly open. A suitably devised valve, however, might be made to considerably diminish this waste of gas at the lower aperture; while from the upper opening, usually closed with a hinged valve, the ordinary and by no means negligible amount of leakage can be entirely obviated by a solid valve of varnished silk, which is firmly bound over the aperture, and which remains perfectly impervious finally rent open at the termination of the voyage. But should it be considered that, even so, a single balloon would not possess sufficient "life" for due safety, then a method that has been advocated by practical aeronauts, but never yet needed to be put in force, could be adopted. This consists in starting on the voyage, not with a single balloon, but with two or more in tandem, and so arranged that when by lapse of time the main balloon became unduly shrunken it might be replenished by the gas from a spare balloon, which could then be discarded.

Anyhow, the fact remains that seventy years ago a balloon of no extraordinary size, and with no special fittings, inflated, moreover, only by household gas, then but recently adopted for ballooning purposes, carried three passengers and an enormous reserve of ballast across five hundred miles in eighteen hours. This voyage, conducted by Charles Green, extended from London to the heart of the German Forests, and was continued, moreover, through a long, cold winter night, which must have told considerably against its sustentation, yet at its termination, dictated only by considerations of convenience, so much ballast was still remaining that there can be no reasonable doubt that with the sun about to rise the length of the journey might have been doubled if desired. It may further be pointed out that no balloon voyage soever yet undertaken in

Europe or America has been carried through under conditions which would tend most to its prolongation. This is easily made clear, for wheresoever in balloon travel there is much diversity of country traversed there will also be frequent variations in the amount of heat radiated into the sky, a fact which influences the height at which a balloon would ride not only directly but indirectly also, owing to the vertical currents ascending and descending which will be engendered. this is but the smaller disturbing element in the sky to be met with commonly over European or American soil. A greater disturbance in equilibrium will be found in the diversity of cloud and sunshine assuredly to be encountered in any extended travel. Passing in and out or even in the neighborhood of cloud in the free sky commonly causes great variation of temperature within the envelope of a balloon, and then great waste of its life inevitably This may be readily understood, for any accession of heat causes an immediate rise to higher altitudes, where, external pressure being diminished, a certain loss of gas is the consequence, followed presently by a descent of the balloon below its previous level, which can only be regained by another loss, equally serious-that of ballast.

Now it is not to be doubted that the above-mentioned frequent vicissitudes would be practically eliminated in the case of a sky passage across such country as lower Central Arabia must be supposed to be, while the withdrawal of the sun's rays at night would simply entail a steady subsidence of the balloon to some lower altitude, where the heat steadily radiated from the now adjacent earth would keep it at a safe, if not at a constant, level without waste or ballast. Thus an aeronaut of experience should have no difficulty in remaining in the sky through-

out any period that might be rendered necessary.

A further all-important point remains as to whether the aeronaut voyager could keep in touch with earth by means of wireless telegraphy. Of this possibility I am able up to a certain point to speak from actual experience in a trial specially organized four years ago. At the hands of all experimenters one main obstacle been found in the disturbing influence of earth. Across water success was invariably greater than over land-a fact, which, indeed, continues to be borne out in the most recent practice. It then naturally suggested itself that a suitable instrument, transported high above the earth's surface in a balloon, and put in due communication with another instrument on the ground, might act with far greater advantage than would similar apparatus operating between two land stations. And this actually proved to be the case.

The apparatus was designed by Mr. Nevil Maskelyne, who also presided at the ground station. The trial took place on the occasion of the garden party of the British Association meeting at Bradford. Here the ground station was established at one end of Lister Park, while a small mine with an electric igniter was also constructed, and this it was my task to endeavor to fire five minutes after I had risen into the sky. The balloon carried both receiving and transmitting instruments, making up a somewhat heavy apparatus, which unfortunately suffered several smart concussions from impact with the ground during a rough and difficult launching. It required the five minutes' grace allowed me to restore the working parts of the instruments to something like order, and, this interval having elapsed, I pressed the button, at the same time calling the attention of my companion in the car-Sir Edmund Fremantle—to the fact. In about fifteen seconds the report of the exploded mine was loudly heard, confirming our own estimate of distance, which amounted to some three miles.

According to agreement, during the next five minutes the receiving instrument was now switched into action, and the signaling of my colleague was at once found to be going forward, and in perfect order. Moreover, his messages had in no way deteriorated in clearness after the balloon had sailed thirty miles away, and was then settling to earth. On the other hand, it was found that after the firing of the mine a wire in the transmitting instrument, which had received damage at the start, had parted, and thus the majority of the messages from the balloon were lost.

This, as I have stated, was four years ago, and the methods of wireless telegraphy have so greatly improved since

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that no shadow of doubt remains in my mind as to its successful use over very extended land distances, where one of the stations is a high-flying balloon. Presumably the chief obstacle would be, as in the case at sea, the interference of a thunderstorm region; but though this may be constantly feared amid the storm systems of the Atlantic, the case must be far otherwise over the arid plains of Arabia.

In the venture thus far sketched out, the advantage that would accrue if the balloon were equipped with wireless telegraphy instruments must be now apparent, for not only could the traveller continue to transmit back to his base a connected description of the land opened up to his view, but in due course he could announce to some appointed look-out station on the far shore his approximate course, with a view to timely succor.

John M. Bacon.

BOOKS AND AUTHORS.

Mr. John Lane is to include William Watson's "The Tomb of Burns" in his series of illustrated poems, "Flowers of Parnassus."

Houghton, Mifflin & Co. are to publish in October a new novel by Mrs. Elizabeth Stuart Phelps Ward, in which a dog is an important character.

The Macmillans will publish early in October Mr. Albert Bigelow Paine's biography of Thomas Nast, which should be one of the most interesting and diverting of the autumn biographies.

Henry Holt & Co. announce a series of biographies on a new plan. Each volume will contain the lives of eminent Americans (not living) in classified groups—actors, artists, authors, etc. The books are to be genuine biographies rather than critical treatises, and each life is to be the work of an authoritative writer. The series will probably be called "Leading Americans" and may be extended indefinitely.

River-land by Robert W. Chambers, which is on the Harper list for autumn publication, is a companion volume to Outdoorland and Orchard-land. It is full of information of the natural history of animals living in and around the streams, and the same attractive plan is followed as in Mr. Chambers's former books in this series—that is, the

animals tell their own stories to Peter and Geraldine, two agreeable and natural little children.

Among the autumn announcements of Harper & Bros. is "The Pan Germanic Doctrine" a study of German political aims and aspirations, which has created something of a stir in England. It is an exposition of Germany's aims and aspirations to be a colonizing world-power. It sets forth the ambition of a certain class among Germans who believe that the Germanic racesthose of Austria, Holland, Switzerland, etc.—as well as the Germans who have left home and established themselves in various parts of the world should first unite in the formation of an economical alliance which they hope would lead to political union for defensive and offensive purposes; second, in the formation of a Central European aimed primarily Customs Union, against England and the States, and secondarily against Russia; third, in a union of all the Germanic peoples-low and high Germans-in one central Germanic confederation. The author is an Englishman long resident in Germany, who has been in constant touch with German politics, and has made German expansion a special study.

The third volume of the reprints of narratives of "Early Western Travels" edited by Mr. Reuben Gold Thwaites and published by the Arthur H. Clark Company of Cleveland presents a translation of André Michaux's account of his travels into Kentucky, 1793—96 and of Francois André's narrative of his travels west of Alleghany mountains in 1802. With these is included the Rev. Thaddeus Mason Harris's Journal of a tour northwest of Alleghany mountains in 1803. These narratives are related geographically and in the

order of time, but they are widely different otherwise, for the two Frenchmen, father and son, while interested primarily in botany and forestry, had also a keen eye for human idiosyncrasies and wrote of men and things with a characteristic French touch; while the New England divine whose memoirs are included with theirs had chiefly a passion for facts, which he presented accurately no doubt, but with no flavor or coloring. The volume is illustrated with several maps and facsimile title pages, and there is also a portrait of the younger Michaux.

Under the somewhat vague title "Biographic Clinics," Dr. George M. Gould of Philadelphia published, a year or more ago, a volume presenting a series of studies of the ill-health of De Quincey, Carlyle, Darwin, Huxley and Browning, designed to show that there was a common origin of the physical infirmities of those distinguished men, and that this origin was eyestrain. He has now followed this volume with a second, in which he makes similar studies of the ill-health of George Eliot, George Henry Lewes, Wagner, Parkman, Jane Welch Carlyle, Spencer, Whittier, Margaret Fuller Ossoli, and Nietzsche. This is an unusual point of view from which to regard the illustrious characters mentioned, but it must be said for Dr. Gould that he sustains his theory by a large mass of evidence, well sifted and effectively presented. It may seem to some readers that he overworks his theory, but that can better be determined by a professional than by a lay critic. Certain it is that all who have experienced for themselves the varied forms of physical and mental misery which may come from eye-strain will be favorably disposed towards his conclusions. P. Blakiston's Son & Co., Philadelphia.

A DEDICATION.

O Love, in whose heart-murmured name

Is charm against life's endless wrong,

Since all the untuned world became In you a song!

I bring not only all I wrought
Into the faltering words of speech,

I dedicate the song I sought Yet could not reach,

Nay, all that passionately fired My heart with hope for ever new Of unattained, but deep-desired Beauty, to you.

Laurence Binyon.

AT THE GATE.

Beyond the gate I see a hand, It beckons me and I must go, The garden plot grows small and I Must rise and travel forth and know—

Ah, little son, 'tis but the white road winding

Across the green hills out towards the

Wouldst find it hard to tread, and the sun blinding,

Ah, little son, look not, rest thou with me.

Beyond the gate I hear a song,
The bravest song I ever heard,
Come out—it cries—and tarry not,
Thou craven heart that hast not
stirred—

Ah, little son, 'tis but the old world calling,

And all the years gone by, and yet to be,

But an old song of dawn and the sands falling,

Ah, little son, heed not, rest thou with me.

Beyond the gate the world is wide, And I have tarried all too long, And see, the least touch lifts the latch, That welcomes me to strife and songAh, little son, thou shouldst not so have hastened

To leave thy tender garden bare to me,

Too soon the years had crowned thee, old and chastened,

Ah, little son, faint not-God go with thee.

H. H. Bashford.

The Spectator.

AT SUNSET.

Each sunset Autumn stands
And scans the rippling fields of
drooping rye,

Shading with arched hands Dark dreamy eyes against the blaze

of sky;
Her smile is tinged with pride,—
Ripe fruits blush round her feet, a
sickle burns beside.

Soon shall her joyous call Charm from the village homes their rustic glory;

The lines of wheat shall fall, The piled-up sheaves hang down

their earlocks hoary; Homeward the load shall sway,

Robbed by light-fingered trees upon its laboring way.

Will Foster.

THE JOY OF EARTH.

Far within a dome of trembling opal throbs the fire,

Mistily its rain of diamond lances shed below

Touches eyes and brows and faces lit with wild desire

For the burning silence whither we would go.

Heart, O heart, once more it is the ancient joy of earth

Breathes in thee and flings the wild wings sunward to the dome

To the light where all the Children of the Fire had birth

Though our hearts and footsteps wander far from home.

A. E.